

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of trademark application Serial No. 76/572,253  
TTAB Opposition 91165809  
For Plastic water bottle, sold empty, in IC 21  
Published in the Official Gazette on (Date) 3/18/2005

TRIFOREST ENTERPRISES INCORPORATED  
v.  
NALGE NUNC INTERNATIONAL CORPORATION

**NOTICE OF  
MOTION FOR SUMMARY JUDGMENT**


Mail Stop TTAB  
Assistant Commissioner for Trademarks  
P.O. Box 1451  
Alexandria, VA 22313-1451

Opposer: TriForest Enterprises, Inc.  
17 Musick  
Irvine, CA 92618

Applicant: Nalge Nunc International Corporation a Delaware Corp.  
75 Panorama Creek Drive  
Rochester, NY 14602-0365

TriForest Enterprises, Inc. (hereafter "TriForest") hereby gives notice of motion for summary judgment against Nalge Nunc International Corporation a Delaware Corp., (hereafter "NNI") pursuant to Fed. R. Civ. P. 56 on the basis that there is no genuine issue of material fact, and opposer is entitled to a judgment as a matter of law because expired utility patents and basic common sense shows that the asserted NNI trade dress is comprised of functional and commonplace features and therefore not registerable.

Respectfully submitted,

By Clement Cheng, Esq.  Date: 4/4/2006  
17220 Newhope St., Suite 127; Fountain Valley, CA 92708



04-11-2006

U.S. Patent & TMO/TM Mail Rcpt Dt. #3:

**PROOF OF SERVICE**

In the matter of trademark application Serial No. 76/572,253

I, the undersigned, declare I am over the age of 18 and not a party to this action. My business address is at 17220 Newhope St., Suite 127 Fountain Valley, CA 92708.

On APRIL 4<sup>TH</sup>, 2006, I served:

**NOTICE OF  
MOTION FOR SUMMARY JUDGMENT**

By placing true copies thereof in a sealed envelope, addressed as follows to:

*I copy sent to:*

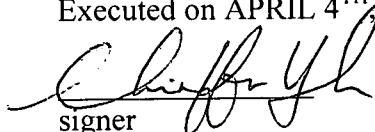
DONALD F. FREI  
WOOD, HERRON & EVANS, L.L.P.  
2700 CAREW TOWER  
441 VINE STREET  
CINCINNATI, OH 45202-2917  
ATTORNEY FOR APPLICANT

*I copy sent to:*

Mail Stop TTAB  
Assistant Commissioner for Trademarks  
P.O. Box 1451  
Alexandria, VA 22313-1451

- ☐ BY PERSONAL SERVICE: I caused such envelope to be delivered by hand to the offices of the addressee(s).
- ☒ BY MAIL: I am readily familiar with the practice of the office for collection and processing of correspondence for mailing with the United States Postal Service. Under that practice, correspondence is put in the office outgoing mail tray for collection and is deposited in the U.S. Mail that same day in the ordinary course of business. I am aware that, on motion of the party served, service is presumed invalid if the postal cancellation date or postage meter date is more than one (1) day after the date of deposit for mailing shown on this proof of service.
- ☒ FEDERAL: I declare under penalty of perjury under the laws of the United States that the foregoing is true and that I am employed in the office of a member of the Bar of this Court at whose direction the service was made.
- ☐ STATE: I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on APRIL 4<sup>TH</sup> 2006, at Fountain Valley, California.

  
signer

Z:\Client 1. LIT ARB\TriForest Ent v. Nalgene TTAB 76572253\T Motion for Summary Judgment\Notice of Motion for Summary Judgment.doc

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TRIFOREST ENTERPRISES INCORPORATED  
v.  
NALGE NUNC INTERNATIONAL CORPORATION

**DECLARATION OF STEVE LIN IN SUPPORT OF  
MOTION FOR SUMMARY JUDGMENT**

Mail Stop TTAB  
Assistant Commissioner for Trademarks  
P.O. Box 1451  
Alexandria, VA 22313-1451

Opposer:  
TriForest Enterprises, Inc.  
17 Musick  
Irvine, CA 92618

Applicant:  
Nalge Nunc International Corporation a Delaware Corp.  
75 Panorama Creek Drive  
Rochester NEW YORK 14602-0365

My Name is Steve Lin, President of TriForest Enterprises, Inc. (hereafter "TriForest"). I have personal knowledge of the day-to-day operations of the company. I instructed my attorney to file a motion for summary judgment against Nalge Nunc International Corporation a Delaware Corp., (hereafter "NNI") pursuant to Fed. R. Civ. P. 56. I believe basic common sense shows that the asserted NNI trade dress is comprised of functional and commonplace features and therefore not registerable.

TriForest Enterprises, Inc. and NNI are bottle selling competitors. NNI sent cease and desist letters to TriForest and TriForest dealers prior to filing the Trade Dress Application on

narrow mouth bottle, confusing the issue with its wide mouth registration implying common law trademark rights on narrow mouth bottles based on it receiving trademark registration #:2755757 on its wide mouth bottle TriForest has a right to sell all its designs of bottles because they are functional and commonplace.

TriForest did not try to copy any ornamental features of the NNI bottle, but emulated the functional aspects of the generic boston round bottles. Triforest prides itself on being able to make high-quality products of equal, if not better quality than all its competitors.

TriForest developed its bottle for universal use and with specialized applications including withstanding temperatures of (121°C) steam sterilization, improved visualization of contents, easier to handle, simplicity, automation friendly for labeling, filling, and visual inspection, storage of culture media, inert fluids, and as a general beverage/water container. Based on the need in the market and the application, the bottles were by the virtue of their design and the raw material used, shatter proof, safe, shrapnel free, able to withstand accidental falls of 5 meters or higher without spilling the content, and by enlarge safer for carrying hazardous, toxic contents that otherwise would be harmful if spilled out by breakage of the bottles. The clear plastic bottle offered several applications that were not exploited earlier by other suppliers. Triforest positioned the bottle as an ideal replacement of lab bottles that are commonly made with glass. Triforest employed the use of inert GE Lexan® Polycarbonate resin as it allowed several properties of glass with clarity and improved safety. The bottle also enabled Triforest to enter several sales channels as the single bottle could satisfy the needs to solve numerous applications, previously only filled by glass, or other plastic bottles.

Triforest is not filing this opposition out of any animosity of NNI, however it is concerned with NNI's monopolistic business practices, and aggressive sales tactics. The old

TriiForest bottle has a different arch angle, cap design, yet due to the shared geneology with all Boston round shaped bottles, has the similiarities found in all Boston Round Bottles despite individual sizes. The photograph, Exhibit 1, is a true and accurate depiction of a side-by-side comparison between the Triforest bottle and the Nalgene bottle. The logo printed on the bottle is the main indicator of source of goods. The depiction of the goods is not disputed, however TriForest denies confusingly similarity of the old bottle with the Nalgene bottle.

The mark-drawing page of NNI's product design, Exhibit 7, is a true and accurate copy of the drawing page. On reading the NNI Mark claims carefully, one can generically assume it describes any boston round bottle of 500 ml and 1000 ml capacity. The same bottle is available as a non water bottle in the lab market, for lab applications, such as the PC media bottles from Nalgene.

The NNI trademark as seen (Exhibit 7) is for the product itself. The drawing page states that it is a, "Plastic water bottle, sold empty, in International Class 21." which would make it a product design. This is a true and accurate statement. The plastic water bottles generally sold in the market are sold empty.

The NNI trademark is functional. Plastic is one of the best materials to make a water bottle. A cylindrical container body minimizes material required while maximizing strength. Laboratory machines for mixing often roll a bottle and would not be able to roll a square bottle. Other laboratory machines are particularly suited for a particular shape of bottle the most common being cylindrical. The relatively narrow container neck also known as a narrow mouth makes it easier to pour from and easier to drink from. The opaque screw cap is cheaper and softer. It would be more difficult to make a transparent cap. The button is the axial connector between the cap and tether. The button allows the tether to rotate about the button and cap. The

button axial connector maintains a low profile to lower bulk, weight and cost. If the tether were directly formed to the screw cap, rotation of the screw cap would move the tether and interfere with a user's hand during cap rotation. The small ring button connection is necessary for rotation with the cap, and the large ring is necessary for connection with the shrink ring. The strap is necessarily visually distinct from the screw cap because they are separate parts. The NNI ratios claimed are common and ordinary and also functional because they provide for optimal plastic usage and strength.

The main body ratios have been ordinary and common for Boston Rounds. Many companies such as Owens-Illinois, and Brockaway Glass have been manufacturing such bottles since early 1960's. The Owens-Illinois website shows the Boston round.

The Bomatic, Inc. website has an illustration of the Boston Round bottle:

[www.bomatic.com/Catalog/boston\\_pvc\\_18oz.html](http://www.bomatic.com/Catalog/boston_pvc_18oz.html) drawing below

Exhibit 8 is a true and accurate copy of the print out of the Bomatic, Inc. website. I visited the Bomatic, Inc. website personally. The bottle of Bomatic, Inc. hereafter (BMI) has the general proportions of the claimed NNI trademark. The diameter to height ratio is basically the same. The BMI ratio is  $3'' \div 6.4'' = .47$  ratio, which would be close to NNI's .4 ratio.

[www.mayfairplastics.com/drawings/Boston16a1.gif](http://www.mayfairplastics.com/drawings/Boston16a1.gif) also shows a Boston Round.

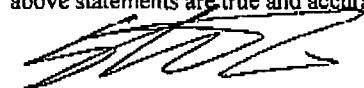
The Boston Round can be a plastic water bottle and can be made transparent. It has a generally cylindrical container body with rounded shoulders interconnecting the upper and lower extremities of a cylindrical sidewall to a relatively narrow container neck. It also has a generally flat, circular container bottom. The Boston round typically includes an opaque screw cap releasably engaged with threads on the upper portion of the neck. Exhibit 9 is a true and accurate copy of the Mayfair Plastics website. I visited the Mayfair Plastics website personally.

of about 0.5 and an overall height neck height ratio of about 0.9. This is within the range of being confusingly similar to the Nalgene alleged trade dress. NNI's 0.4 diameter to height ratio and a 0.8 neck height to total height ratio are standard. The ratios are functionally necessary to fit bottles into standard laboratory machines, packaging machines, and related bottle holders.

A round bottle is automated labeling machine friendly. It allows labels to be adhered by uniform rotation. A simple cylindrical bottle is less expensive to make than bottles with several curves, textures, and angles. Every feature in plastic production is an engineering complication.

Exhibit 2, is a true and accurate copy of Remey US Patent 4,595,130 issued Jun 17, 1986 now expired. Exhibit 2, shows that the button tether connection is functional. Exhibit 3, is a true and accurate copy of T.B. Birnbaum U.S. Patent No. 524,159 Stopper Or Cover For The Mouths Of Bottles. Exhibit 3, shows that the ring tether connection is functional and had been implemented on a Boston round bottle over 100 years ago. Exhibit 4, is a true and accurate copy of US Patent 4,526,289 to Schiemann and shows that a threaded cap connection with button top and ring bottom tether connection is functional.

I declare under penalty of perjury under the laws of the United States of America that the above statements are true and accurate to the best of my knowledge.



Steve Lin, President for Triforest

3/30/2006

date

The Mayfair Plastics Boston round shown in the drawing above has a diameter high ratio of about 0.5 and an overall height neck height ratio of about 0.9. This is within the range of being confusingly similar to the Nalgene alleged trade dress. NNI's 0.4 diameter to height ratio and a 0.8 neck height to total height ratio are standard. The ratios are functionally necessary to fit bottles into standard laboratory machines, packaging machines, and related bottle holders.

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I declare under penalty of perjury under the laws of the United States of America that the above statements are true and accurate to the best of my knowledge.

See previous page for signature  
Steve Lin, President for Triforest                      date

**PROOF OF SERVICE**

In the matter of trademark application Serial No. **76/572,253**

I, the undersigned, declare I am over the age of 18 and not a party to this action. My business address is at 17220 Newhope St., Suite 127 Fountain Valley, CA 92708.

On April 4, 2006, I served:

**DECLARATION OF STEVE LIN IN SUPPORT OF  
MOTION FOR SUMMARY JUDGMENT**

By placing true copies thereof in a sealed envelope, addressed as follows to:

*1 copy sent to:*

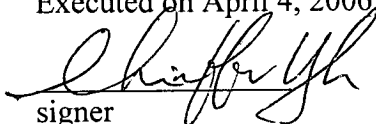
DONALD F. FREI  
WOOD, HERRON & EVANS, L.L.P.  
2700 CAREW TOWER  
441 VINE STREET  
CINCINNATI, OH 45202-2917  
ATTORNEY FOR APPLICANT

*1 copy sent to:*

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- ☒ **BY MAIL:** I am readily familiar with the practice of the office for collection and processing of correspondence for mailing with the United States Postal Service. Under that practice, correspondence is put in the office outgoing mail tray for collection and is deposited in the U.S. Mail that same day in the ordinary course of business. I am aware that, on motion of the party served, service is presumed invalid if the postal cancellation date or postage meter date is more than one (1) day after the date of deposit for mailing shown on this proof of service.
- ☒ **FEDERAL:** I declare under penalty of perjury under the laws of the United States that the foregoing is true and that I am employed in the office of a member of the Bar of this Court at whose direction the service was made.
- ☐ **STATE:** I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 4, 2006, at Fountain Valley, California.

  
signer

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TriForest Enterprises, Inc.  
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Applicant:

Nalge Nunc International Corporation a Delaware Corp.  
75 Panorama Creek Drive  
Rochester NEW YORK 14602-0365

TriForest Enterprises, Inc. (hereafter "TriForest") moves for summary judgment against Nalge Nunc International Corporation a Delaware Corp., (hereafter "NNI") pursuant to Fed. R. Civ. P. 56. There is no genuine issue of material fact, and opposer is entitled to a judgment as a matter of law. Expired utility patents and basic common sense shows that the asserted NNI trade dress is comprised of functional and commonplace features and therefore not registerable.

**BACKGROUND**

TriForest Enterprises, Inc. and the applicant both sell plastic water bottles and are competitors in the marketplace. TriForest previously sold a small number of an old design

narrow mouth round bottles but stopped after NNI sent cease and desist letters to TriForest and TriForest dealers. NNI's allegations forced TriForest to make design modifications. The new TriForest design is not disputed, but TriForest has a right to sell the old design because it is functional and commonplace.

A side-by-side comparison (Exhibit 1) of the old TriForest bottle and the Nalgene bottle shows that the bottles are not identical. NNI alleges that they are confusingly similar. TriForest denies confusingly similarity. Customers look to the logo printed on the bottle as the main indicator to determine source of goods. Here, anyone can identify the bottles by their printed trademarks on the bottle. Thus, as a matter of law, there cannot be confusing similarity.

#### **THE MARK IS A PRODUCT DESIGN WHICH IS FUNCTIONAL**

The mark should have been refused under Trademark Act §2(e)(5), 15 U.S.C. 1052(e)(5) stating, "No trademark by which the goods of the applicant may be distinguished from the goods of others shall be refused registration on the principal register on account of its nature unless it: . . . (e) Consists of a mark which ... (5) comprises any matter that, as a whole, is functional."

The mark is a design configuration that has a utilitarian purpose. *TraFFix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23, 58 USPQ2d 1001 (2001); *Valu Engineering, Inc. v. Rexnord Corp.*, 61 USPQ2d 1422 (Fed. Cir. 2002); *In re Bose Corp.*, 772 F.2d 866, 277 USPQ 1 (Fed. Cir. 1985); *In re R. M. Smith, Inc.*, 734 F.2d 1482, 222 USPQ 1 (Fed. Cir. 1984); TMEP §1202.02(a) et seq.

Functionality is an absolute bar to registration. *Yurman Design, Inc. v. PAJ, Inc.*, 262 F.3d 101, 116 (2d Cir. 2001), states that the "nonfunctionality requirement protects competition even at the cost of potential consumer confusion." So strong is the doctrine that even incontestable marks can be canceled on the basis of functionality. *Wilhelm Pudenz v. Littlefuse*,

Inc., 177 F.3d 1204, 1211-1212, "We hold that a trademark registration that has achieved incontestable status under 15 U.S.C. § 1065 is still subject to attack based on functionality."

NNI is trying to get a patent from the trademark office, which is improper. *Valu Eng'g, Inc. v. Rexnord Corp.*, 278 F.3d 1268, 1273 states:

Morton-Norwich, 671 F.2d at 1336-37, 213 U.S.P.Q. (BNA) at 11-12, the Supreme Court and this court's predecessor have held that mark is not registrable if the design described is functional, because "patent law, not trade dress law, is the principal means for providing exclusive rights in useful product features." *Elmer v. ICC Fabricating*, 67 F.3d 1571, 1580, 36 U.S.P.Q.2D (BNA) 1417, 1423 (Fed. Cir. 1995). The First Circuit likewise has noted that "trademark and trade dress law cannot be used to evade the requirements of utility patents, nor the limits on monopolies imposed by the Patent Clause of the Constitution." *I.P. Lund Trading ApS v. Kohler*, 163 F.3d 27, 38, 49 U.S.P.Q.2D (BNA) 1225, 1232 (1st Cir. 1998). Commentators share this view: "trademark law cannot properly make an 'end run' around the strict requirements of utility patent law by giving equivalent rights to exclude." J. Thomas McCarthy, 1 McCarthy on Trademarks and Unfair Competition § 7:64, 7-147 (4th ed. 2001).

The functionality doctrine thus accommodates trademark law to the policies of patent law:

The functionality doctrine prevents trademark law, which seeks to promote competition by protecting a firm's reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature. It is the province of patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time, 35 U.S.C. §§ 154, 173, after which competitors

are free to use the innovation. If a product's functional features could be used as trademarks, however, a monopoly over such features could be obtained without regard to whether they qualify as patents and could be extended forever (because trademarks may be renewed in perpetuity).

NNI's product design describes the mark as:

The mark consists of a plastic water bottle as shown, namely, a plastic water bottle having a transparent, generally cylindrical container body with rounded shoulders interconnecting the upper and lower extremities of a cylindrical sidewall to a relatively narrow container neck and a generally flat, circular container bottom, respectively; an opaque screw cap releasably engaged with threads on the upper portion of the neck and having a button connected to the center of its top surface via a short stem; and a strap terminating in small and large annular rings respectively encircling the button stem and the lower portion of the neck such that the large annular ring is spaced apart and visually distinct from the screw cap, wherein the ratio of the diameter of the generally cylindrical container body to the overall height of the water bottle is approximately 0.4 and the ratio of the height of the generally cylindrical container body extending between the neck and the container bottom to the overall height of the water bottle is approximately 0.8.

The NNI description is filled with highly functional words and phrases such as: plastic water bottle; cylindrical container body; narrow container neck; screw cap releasably engaged with threads; strap; and button stem. The highly functional words and phrases make the description sound like a utility patent claim. Because the mark is functional, even a showing of secondary meaning does not remove the absolute bar to registration. *TraFFix Devices, Inc. v.*

Marketing Displays, Inc., 532 U.S. 23, 58 USPQ2d 1001, 1007 (2001).

NNI may counter that the function of all plastic water bottles is to hold water, and that holding water should be a protected de facto functional feature incidental to the claim of trademark protection.

Valu Eng'g, Inc. v. Rexnord Corp., 278 F.3d 1268, 1274 states,

Our decisions distinguish de facto functional features, which may be entitled to trademark protection, from de jure functional features, which are not." In essence, de facto functional means that the design of a product has a function, i.e., a bottle of any design holds fluid." In re R.M. Smith, Inc., 734 F.2d 1482, 1484, 222 U.S.P.Q. (BNA) 1, 3 (Fed. Cir. 1984). De facto functionality does not necessarily defeat registrability. Morton-Norwich, 671 F.2d at 1337, 213 U.S.P.Q. (BNA) at 13 (A design that is de facto functional, i.e., "'functional' in the lay sense . . . may be legally recognized as an indication of source."). De jure functionality means that the product has a particular shape "because it works better in this shape." Smith, 734 F.2d at 1484, 222 U.S.P.Q. (BNA) at 3. ...

To determine whether a particular product design is de jure functional, we have applied the "Morton-Norwich factors": (1) the existence of a utility patent disclosing the utilitarian advantages of the design; (2) advertising materials in which the originator of the design touts the design's utilitarian advantages; (3) the availability to competitors of functionally equivalent designs; and (4) facts indicating that the design results in a comparatively simple or cheap method of manufacturing the product. Morton-Norwich, 671 F.2d at 1340-41, 213 U.S.P.Q. (BNA) at 15-16.

There are other bottles that are fairly simple in design that have been registered. NNI

would argue that the fact that these bottles hold liquid is a de facto utilitarian function. NNI would cite the Listerine bottle registered as U.S. Trademark Reg. No. 2287138 (Mouthwash Class 3) and maybe the Chanel bottle U.S. Trademark Reg. No. 2382784 (Perfume Class 3). It is true that the mouth wash bottle and perfume bottle were registered.

Note that the NNI trademark is for the product itself. The drawing page states that it is a, "Plastic water bottle, sold empty, in International Class 21." which would make it a product design. On the other hand, consumers purchase the other bottles primarily to obtain the mouthwash or perfume inside. This would mean that the mouth wash bottle and perfume bottle are product packaging instead of the product itself. The essence of good product packaging is distinctive ornamentation, but the essence of good product design is functionality.

In both cases the structure of the mouth wash bottle and perfume bottle does not provide substantial utilitarian advantages. Looking at the registration certificate of U.S. Trademark Reg. No. 2382784 the perfume bottle has a generic beveled rectangular body, but also has a distinctive cap stopper that also has a beveled architecture. The bottle body bevels are decorative because they add lines and definition to the overall look. The cap does not functionally need to be beveled or oversized as seen in the registration certificate. Furthermore, the bevels join to form decorative facets that are primarily ornamental as opposed to functional.

Similarly, the Listerine bottle as shown in U.S. Trademark Reg. No. 2287138 does not perform better because it has beveled designs. The ornamentation on the perfume and mouth wash bottle costs more to produce, and decreases the potential volume of the bottle. Making the bottle round would increase the volume and contribute to a de jure utilitarian advantage, however, the ornamental style of the perfume and mouth wash bottle does not substantially contribute to any functional advantage.

TriForest argues that these features of the NNI bottle are stated in such a way that they have de jure functionality, in other words, the specific features mentioned in the trademark description are particularly functionally advantageous. It is the recitation of the particular functional advantages that makes the trademark description sound like a patent claim. The particular functional advantages if monopolized by NNI, would limit TriForest's revenue by limiting product design choices.

## **PARTICULAR FUNCTIONAL ADVANTAGES OF THE NNI PRODUCT CONFIGURATION**

The functionality issue has been discussed in discovery. The applicant in interrogatory #11 asked the opposer why the opposer adopted the old TriForest design. TriForest responded that these particular features are functionally beneficial. The interrogatory and response is quoted below.

### **INTERROGATORY NO. 11:**

Set forth with specificity the circumstances and all facts regarding, relating or referring to the selection by Opposer of the configurations of the goods identified in response to Interrogatory No. 1, and identify all documents related thereto.

### **RESPONSE TO INTERROGATORY NO. 11:**

The applicant has the current statement of the trademark in the trademark Office as: The mark consists of a plastic water bottle as shown, namely, a plastic water bottle having a transparent, generally cylindrical container body with rounded shoulders interconnecting the upper and lower extremities of a cylindrical sidewall to a relatively narrow container neck and a generally flat, circular container bottom, respectively; an opaque screw cap

releasably engaged with threads on the upper portion of the neck and having a button connected to the center of its top surface via a short stem; and a strap terminating in small and large annular rings respectively encircling the button stem and the lower portion of the neck such that the large annular ring is spaced apart and visually distinct from the screw cap, wherein the ratio of the diameter of the generally cylindrical container body to the overall height of the water bottle is approximately 0.4 and the ratio of the height of the generally cylindrical container body extending between the neck and the container bottom to the overall height of the water bottle is approximately 0.8.

The opposer designed the original bottle based on a review of various Boston round designs. The opposer then created the original bottle based on efficient engineering principles.

The original bottle is made of plastic because plastic is a good material to make a water bottle. Plastic is generally well accepted as a way of making a bottle. Plastic is relatively inexpensive compared to stainless steel or silver. Plastic is watertight and can seal water within a closed container. Plastic can also be formed with a closure that is threaded and watertight. Plastic is a petroleum derivative that is relatively abundant compared to metal. The opposer did not make the bottles out of wood, stone or soap because these materials are not as durable. A soap bottle would dissolve in water and a wooden bottle would split and is not well suited for holding a liquid. During the autoclave process, the plastic is particularly well-suited for the construction of the bottle.

The opposer made bottles that were transparent so that users could look into the container

and see if there are contents within the container. Transparency of the bottle also provides a user with the opportunity to determine the quantity of liquid within the bottle. Transparency also allows a user to determine if there are color changes or any other types of qualitative change within the bottle. Transparency is particularly useful during hiking because a foreign object could accidentally fall inside the bottle and a user may drink the foreign object by accident if the user could not see inside the bottle. In laboratory tests, a user may see foreign objects that have accidentally fallen inside of the bottle that may change the results of any laboratory tests. In laboratory use, the bottle often has a media inside that is supposed to be sterile. Having a transparent surface allows a laboratory worker to look inside of the bottle to see if there is anything foreign, such as an insect like a mosquito, fly, mayfly or cockroach. The transparency of the bottle is also helpful for a user because the user can see if the bottle is clean. If the bottle is dirty, the user may want to clean the bottle. If the user wants a dirty bottle, having a transparent surface would insure that there is debris in the bottle. Overall, transparent bottles have been in use since early glass bottles. Early glass bottles are ancient.

The bottle is generally cylindrical with rounded shoulders because some machines roll the bottle. Also, the bottle been generally cylindrical with rounded shoulders allows a greater volume to surface area ratio. This is helpful when optimizing construction so that the plastic use is minimized and the strength of the bottle is maximized. The rounded shoulders interconnect with the upper and lower extremities of the cylindrical sidewalls because if they were not connected, the bottle would fall apart and the contents will leak out. It is better that the bottles are made of integrally formed or blown pieces, rather than

pieced together from a number of independent interlocking pieces.

The relatively narrow container neck is commonly known as a narrow mouth bottle. The narrow mouth bottle is good because it is easier to pour of the contents or to drink from the bottle. If the mouth is too large, it is easier to spill all over the place. The narrow mouth bottle is a very good configuration. There are a wide number of narrow mouth bottles such as milk bottles. Milk is put into bottles that have a narrow mouth because this makes it easier to pour the milk. Orange juice is also put into bottles that have a narrow mouth because it is easier to pour the orange juice. A variety of liquids can be put into a narrow mouth bottle allowing easier pouring of the contents. This applies to granular media such as sand, or coffee grounds as well. When a person purchases a can of coffee at the store that is in the 5 lb. canned version, the person needs to use the scoop that that can comes with because it is hard to pour out of a can that has a large diameter. The contents will pour out of the middle portion of the mouth, but also out of the sides of the mouth. The stream of contents is proportional to the radius of the bottle opening.

The bottle has a generally flat container bottom that a circular because the bottle is in the shape of a cylinder. The circular bottom is formed by the bisecting plane between the cylinder and a plane. The flat bottom is very helpful. If the bottom is not flat, the bottle has a tendency to tip over. The bottle should not tip over. If the bottle tips over the contents will pour out. Having a flat bottom is the best way to keep the bottle from tipping over. Alternative methods such as using adhesive resin to bond the bottle to a table is not as good because the bottle would become stuck and difficult to remove from a

table. The bottle could also be made to have a circular depression such that the bottom of the bottle forms a rim. This is helpful for strength of the bottle. If the bottle has a small circular depression or a broad one, the best way to make the bottle is with a flat bottom.

The screw cap is opaque and engaged with threads on the upper portion of the neck because transparent material is more expensive and difficult to work with on a screw cap. The screw cap should be softer and thus opaque materials are better at forming the screw cap. It would be more expensive to make transparent screw caps because the plastic is more expensive. If a user can see through the wall of the bottle, it is not that big of a deal that the user cannot see through the screw cap. The screw cap engages with threads because it is easier to screw on a bottle cap rather than snap it on. The snap on version is too easily snapped off. The screw configuration is a better way to seal the bottle with certainty.

The screw cap has a button connected to the center of its top surface via a short stem because the screw cap is tethered to the bottle. The tether rotates about the button that serves as an axis of rotation to retain the tether to the cap. Once the user takes off the cap, the tether is very helpful because otherwise the cap would be lost or roll away. The connection is formed as a button because the button configuration provides a good axial connection while maintaining low weight and cost. The button is essentially a rivet that turns. If the tether were directly formed to the screw cap, the screw cap would stop turning because the tether would bias the screw cap by exerting a clockwise force. Therefore, an axial connection is preferred. The tether connection to the shrink ring was

the easiest connection. Other alternatives such as Sonic welding would require additional machinery and production process. The tether connection to the shrink ring provides a manual solution for connection.

The strap terminates in small and large annular rings respectively encircling the button stem and the lower portion of the neck such that the large annular ring is spaced apart and visually distinct from the screw cap, because the small ring is necessary for rotation with the cap, and the large ring is necessary for connection with the shrink ring. The button stem is preferably encircled because that provides a pivotal connection. The strap is visually distinct from the screw cap because they are separate parts. They are separate parts because the screw cap needs to rotate around the mouth of the bottle while the strap remains stationary. If the strap rotates with the screw cap, the strap will interfere with the hand of the user especially if the user is removing or putting the cap on using a single hand. The top ring is smaller because it does not need to be very large for the connection with the cap. Though bottom ring is larger because it must fit around the shrink ring near the base of the bottle. If the top ring were larger than the bottom, the ring would protrude over the top surface of the cap and hinder the fingers of the user. The top ring should be smaller than the top of the top surface of the cap because the fingers of the user preferably grasp the interface between the top surface of the cap and the side surfaces of the cap. The top ring being in the same size as the top surface of the cap would limit the user to grasping only the side surfaces of the cap. This limitation would prevent a user from tightening the cap as much as a user could have if the user had access to grab more surface area on the cap.

The ratio of the diameter of the generally cylindrical container body to the overall height of the water bottle is approximately .4 because in a 500ml cylindrical container, that ratio produces a circumference that is approximately equivalent to the size of an average person's hand. The .4 ratio is particularly comfortable and easy to hold. If the container were overly long, it would require additional plastic to create and would not be as strong. The overlong container would also not be as strong because is more of a stick shaped container. The 500ml cylindrical container is a standard size. It is half a liter. A liter is a metric size. Metric units are widely adopted in the world. A metric units are particularly helpful in science because all of the unit's are based 10. Dealing with inches and feet, and gallons makes calculations difficult. Therefore, the standard size half liter container is particularly well-suited for a person's hand when .4 ratio is in place.

The ratio of the height of the generally cylindrical container body extending between the neck and the container bottom to the overall height of the water bottle is approximately 0.8 because with the .4 ratio previously mentioned, the cap would be on the order of several inches in height. Having a cap that produces a .7 ratio would make the cap size overly long and create a long neck that is taller than it is wide. Having a cap that produces a .9 ratio would make the gripping area too small for an average person's fingers. Therefore, the .8 ratio is derived from the .4 ratio which is derived from the combination of the standard size 500ml container in combination with an average person's hand size.

The container is designed to hold water because it is a bottle. Water is the most plentiful liquid on the planet. A wide variety of liquids can be stored within the container. If the container were not designed to hold water, it would not work as well as a container that could hold water. Humans drink water during exercise and on a daily basis. Humans are comprised of a substantial percentage of water weight. Therefore, the opposer designed the bottle to hold water because holding water is a convenient and utilitarian function of a bottle.

### CHART OF UTILITARIAN ADVANTAGES

Because of the descriptive nature of the interrogatory response above, the utilitarian advantages may be condensed and organized in a chart format.

MARK DESCRIPTION	UTILITARIAN ADVANTAGES
The mark consists of a plastic water bottle as shown, namely,	Plastic is one of the best materials to make a water bottle. Plastic is inexpensive, durable, watertight, chemically inert resisting corrosion, cryogenically freezable, sterilization autoclavable, strong and light. Plastic forms a good water seal.
a plastic water bottle having a transparent,	Transparent bottles allow a user to see inside the container to find foreign objects and see if the bottle is clean. Glass was used in ancient bottles because glass can be transparent.
generally cylindrical container body	A cylindrical container body minimizes material required while maximizing strength. Laboratory machines for mixing often roll a bottle and would not be able to roll a square bottle.  Generally cylindrical bottle with rounded shoulders allows a greater volume to surface area ratio and optimizes plastic use.

with rounded shoulders interconnecting the upper and lower extremities of a cylindrical sidewall to a	The rounded shoulders interconnect with the upper and lower extremities of the cylindrical sidewalls to provide good structural integrity. Square shoulders are not as strong and use more material.  Round cylinders are particularly strong in proportion to material used because uniform wall thickness and circumference provides even pressure distribution.
relatively narrow container neck	The relatively narrow container neck also known as a narrow mouth makes it easier to pour from and easier to drink from. A wide mouth is not as good for pouring because contents will pour from the sides of the mouth.
and a generally flat, circular container bottom, respectively;	The flat container bottom is necessarily circular because the bottle is cylindrical. A bisecting plane through a cylinder forms a circular bottom. If the bottom is not flat, the bottle will not stand up.
an opaque screw cap releasably engaged with threads on the upper portion of the neck	The opaque screw cap is cheaper and softer. It would be more difficult to make a transparent cap. Transparent material such as polycarbonate is more expensive, harder, more brittle and would not seal well as a materials that are opaque.  Because user can see through the wall of the bottle, the user does not need to see through the screw cap. Finally, a threaded connection is stronger than a snap on connection.
and having a button connected to the center of its top surface via a short	The button is the axial connector between the cap and tether. The button allows the tether to rotate about the button and cap. The button axial connector maintains a low profile to lower bulk, weight

stem;	and cost. If the tether were directly formed to the screw cap, rotation of the screw cap would move the tether and interfere with a user's hand during cap rotation.
and a strap terminating in small and large annular rings respectively encircling the button stem and the lower portion of the neck such that the large annular ring is spaced apart and visually distinct from the screw cap,	<p>The small ring button connection is necessary for rotation with the cap, and the large ring is necessary for connection with the shrink ring. The strap is necessarily visually distinct from the screw cap because they are separate parts.</p> <p>The top ring is smaller to save reduce plastic usage, and be unobtrusive to user grip. The bottom ring is larger to fit around the shrink ring on the neck.</p> <p>The rings are annular to facilitate rotation.</p>
wherein the ratio of the diameter of the generally cylindrical container body to the overall height of the water bottle is approximately 0.4 and the ratio of the height of the generally cylindrical container body extending between the neck and the	<p>The ratio of the diameter of the generally cylindrical container body to the overall height of the water bottle is approximately .4 because in a 500ml cylindrical container, that ratio produces a circumference that is approximately equivalent to the size of an average person's hand. The .4 ratio is particularly comfortable and easy to hold. If the container were overly long, it would require additional plastic to create and would not be as strong. The 500ml cylindrical container is a standard size half liter. The standard size half liter container is particularly well-suited for a person's hand and a .4 ratio.</p>

<p>container bottom to the overall height of the water bottle is approximately 0.8.</p>	<p>The ratio of the height of the generally cylindrical container body extending between the neck and the container bottom to the overall height of the water bottle is approximately 0.8 because with the .4 ratio, the cap would be about several inches in height. Having a cap that produces a .7 ratio would make the cap size overly long and create a long neck that is taller than it is wide. Having a cap that produces a .9 ratio would make the gripping area too small for an average person's fingers. Therefore, the .8 ratio is derived from the .4 ratio which is derived from the combination of the standard size 500ml container in combination with an average person's hand size.</p>
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### **US PATENTS DESCRIBE THE UTILITARIAN ADVANTAGES OF THE NNI CAP, TETHER AND BUTTON CONFIGURATION**

United States utility patents are evidence of functionality and show that NNI's alleged trade dress elements are functional.<sup>1</sup> The chart below organizes the patented utility advantages.

<b>MARK DESCRIPTION</b>	<b>PATENTED UTILITARIAN ADVANTAGES</b>
The mark consists of a plastic water bottle as	"Conventionally, plastic containers are well known for containing water, gasoline and other liquids ...." (Berney US Patent 4,595,130,

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<sup>1</sup> "The existence of a valid functional patent disclosing the utilitarian advantages of the configuration in question is very strong, if not conclusive, evidence of the functionality of the configuration" McCarthy's on Trademarks and Unfair Competition at §7:88, page 7-238, rev 12/2000.

shown, namely, a plastic water bottle	Col 1, lines 11-16)
having a transparent, generally cylindrical container body	T.B. Birnbaum U.S. Patent No. 524,159 STOPPER OR COVER FOR THE MOUTHS OF BOTTLES was patented August 7, 1894. and shows a generally cylindrical container body in Figs. 2-3. In 1894, 112 years ago, glass bottles were generally known to be transparent.
with rounded shoulders interconnecting the upper and lower extremities of a cylindrical sidewall to a	T.B. Birnbaum Figs. 2-3 show rounded shoulders interconnecting with the upper and lower extremities of the cylindrical sidewalls to provide good structural integrity.
relatively narrow container neck and a generally flat, circular container bottom, respectively;	Birnbaum Figs. 2-3 show a relatively narrow container neck also known as a narrow mouth for easy pour. Although the patent does not show the bottle bottom, it would generally be understood that the bottle bottom was circular and flat.
an opaque screw cap releasably engaged with threads on the upper portion of the neck	US Patent 4,526,289 to Schiemann shows an opaque screw cap and claims it also as, "5. Screw stopper according to claim 1, wherein the external threads and internal threads have a diameter of about 30 to 50 mm. with a pitch of about 5 mm. and extend axially over about 15 to 25 mm., and the collar extends radially about 2 mm. beyond the external threads and the collar and the cylinder wall have an axial extent of about 5 mm." (col 4, lines 42-48)

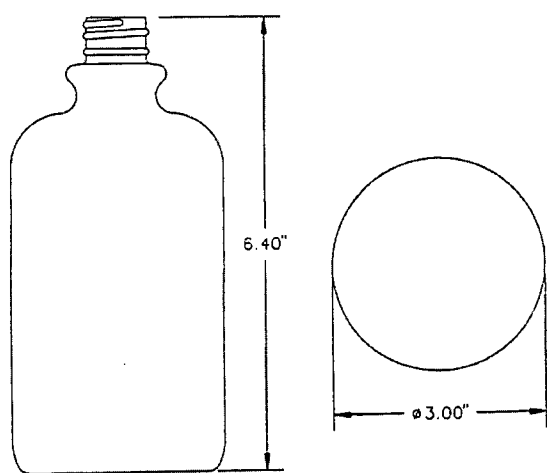
<p>and having a button connected to the center of its top surface via a short stem;</p>	<p>NNI trademark application element “having a button connected to the center of its top surface via a short stem” is functional. The button connection is described in Berney US Patent 4,595,130 issued Jun 17, 1986 now expired. “A flexible tether 27 includes a loop 28 at one end engaging an annular groove 29 adjacent the upper side 19 of the cap and having a further loop 30 engaging an annular groove 31 around the base of the pouring neck 11 thus permitting the cap to be rotated freely yet anchoring same to the container 10.” (US Patent 4,595,130, Col 3, lines 33-38) Here the NNI button is formed in the Berney patent as “an annular groove 29 adjacent the upper side 19 of the cap”.</p>
<p>and a strap terminating in small and large annular rings respectively encircling the button stem and the lower portion of the neck such that the large annular ring is spaced apart and visually distinct from the screw cap,</p>	<p>Loop 28 of the Berney ‘130 patent is the NNI small annular ring and loop 30 of the patent is the NNI large annular ring. Fig. 5 of the patent shows a button 19 rising on a short stem forming a groove 29 (US Patent 4,595,130, Fig. 5, sheet 4 of 5) Loop 28 of the Berney patent is smaller than loop 30 making Loop 28 the small annular ring and loop 30 the large annular ring.</p> <p>As seen in Fig. 2 of the ‘130 patent, the ring is visually distinct from the screw cap, screw cap is necessarily be visually distinct from the annular ring, because they are separate pieces.</p> <p>T.B. Birnbaum U.S. Patent No. 524,159 Figs. 2-3 also shows a large annular ring B encircling the lower portion of the neck such</p>

	that the large annular ring B is spaced apart and visually distinct from the screw cap. "A is the rubber thimble or cap , B is the rubber ring adapted to be placed about the neck of a bottle, and C a string for securing the rubber cap and ring together." (T.B. Birnbaum, col 2, lines 56-59)
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**THE NNI PRODUCT RATIOS ARE ORDINARY AND COMMON RATIOS FOR BOSTON ROUND PLASTIC WATER BOTTLES**

Commonplace product configuration cannot become a trademark. NNI claims a 0.4 diameter to height ratio and a 0.8 neck height to total height ratio. Note that the neck height begins from the bottom of the neck. Regarding the main body ratios, they have been ordinary and common for Boston Rounds that have been in the marketplace for many years. There are many companies such as Owens-Illinois, and Brockaway Glass who have been manufacturing such bottles since early 1960's. The Owens-Illinois website shows the Boston round.<sup>2</sup>

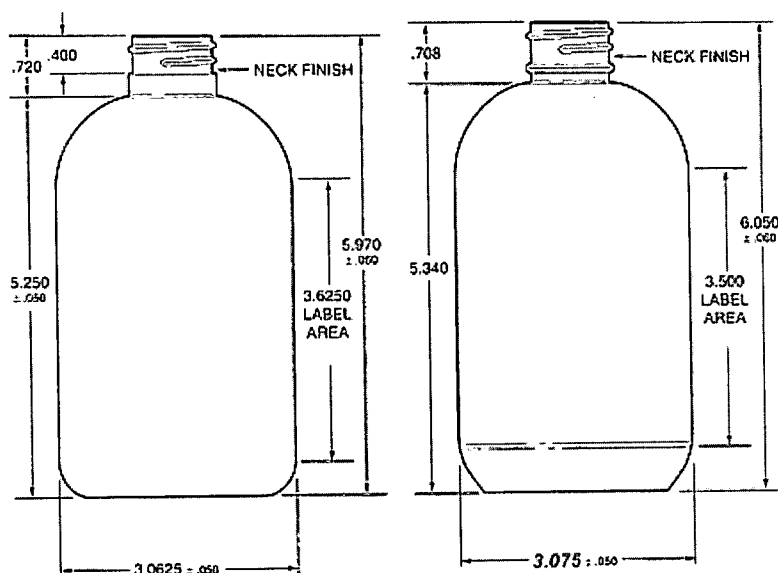
Additionally, the Bomatic, Inc. website has an illustration of the Boston Round bottle: The drawing below was copied from [www.bomatic.com/Catalog/boston\\_pvc\\_18oz.html](http://www.bomatic.com/Catalog/boston_pvc_18oz.html)



<sup>2</sup> <http://www.o-i.com/pkgolutions/healthcaremed/healthcare/glasspkgoverview.asp>

The bottle of Bomatic, Inc. hereafter (BMI) has the general proportions of the claimed NNI trademark. The diameter to height ratio is basically the same. The BMI ratio is  $3'' \div 6.4'' = .47$  ratio, which would be close to NNI's .4 ratio.

The drawing below was copied from [www.mayfairplastics.com/drawings/Boston16a1.gif](http://www.mayfairplastics.com/drawings/Boston16a1.gif)



Material: HDPE  
Neck Finish: 28/410  
Weight: 30 grams  
Bulk Pack: 175 Box w/Liner  
Box Size: 23 x 15 7/16 x 29 7/8 in.  
Box Weight: 15 lbs.

S.P.I. Tolerances Apply  
Unless Otherwise Noted

The Boston Round can be a plastic water bottle and can be made transparent. It has a generally cylindrical container body with rounded shoulders interconnecting the upper and lower extremities of a cylindrical sidewall to a relatively narrow container neck. It also has a generally flat, circular container bottom. The Boston round typically includes an opaque screw cap releasably engaged with threads on the upper portion of the neck.

The Boston round has a ratio of the diameter of the generally cylindrical container body to the overall height of the water bottle of approximately 0.4 and the ratio of the height of the generally cylindrical container body extending between the neck and the container bottom to the

overall height of the water bottle is approximately 0.8. The Mayfair Plastics Boston round shown in the drawing above has a diameter high ratio of about 0.5 and an overall height neck height ratio of about 0.9. This is within the range of being confusingly similar to the Nalgene alleged trade dress. NNI's 0.4 diameter to height ratio and a 0.8 neck height to total height ratio are standard. The ratios are functionally necessary to fit bottles into standard laboratory machines, packaging machines, and related bottle holders.

Even if the ratios were not standard, they are too basic to be trade dress. McCarthy's on Trademarks and Unfair Competition states, "Simple, cylindrical containers have often been held to be merely utilitarian and functional. The First Circuit held that a 'prosaic' cylindrical container for crackers was functional and unprotectable and noted that if the law were not so, the unacceptable result would be that 'the first user of a container such as the now-standard soup can, potato chip bag, or cracker box would be able to preclude competitors from using these highly functional containers.'" <sup>3</sup>

A round bottle is automated labeling machine friendly. It allows labels to be adhered by uniform rotation. A simple cylindrical bottle is less expensive to make than bottles with several curves, textures, and angles. Every feature in plastic production is an engineering complication.

## CONCLUSION

Free competition is an important public policy. As the court stated in *Valu Engineering, Inc. v. Rexnord Corp.*, 61 USPQ2d 1422 (Fed. Cir. 2002):

An important policy underlying the functionality doctrine is the preservation of competition. As this court's predecessor noted in *Morton-Norwich*, the "effect upon competition 'is really the crux'" of the functionality inquiry, 671 F.2d at 1341, 213

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<sup>3</sup> McCarthy's on Trademarks and Unfair Competition at §7:87, page 7-235, rev 12/2000.

U.S.P.Q. (BNA) at 16, and, accordingly, the functionality doctrine preserves competition by ensuring competitors "the right to compete effectively." *Id.* at 1339. As we stated in *Brunswick Corp. v. British Seagull Ltd.*, 35 F.3d 1527, 1531, 32 U.S.P.Q.2D (BNA) 1120, 1122 (Fed. Cir. 1994), "functionality rests on 'utility,' which is determined in light of 'superiority of design,' and rests upon the foundation of 'effective competition.'" The importance of competition was reaffirmed in *Qualitex*, in which the Supreme Court focused on whether a feature "would put competitors at a significant non-reputation-related disadvantage." *Qualitex*, 514 U.S. at 165. And when discussing the policy behind limiting trade dress protection, the Supreme Court in *TrafFix* noted that "allowing competitors to copy will have salutary effects in many instances." *TrafFix*, 121 S. Ct. at 1260.

The mark is functional and basically just a general use bottle with a tether screw cap. The Trademark Act is not a 35 U.S.C. §102(b)<sup>4</sup> loophole. Therefore, the opposer prays that the applicant be denied registration under Trademark Act §2(e)(5), 15 U.S.C. §1052(e)(5).

Respectfully submitted,

By Clement Cheng, Esq. *Clement Cheng* Date: 4/3/2006  
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Phone: 714-825-0555

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<sup>4</sup> 35 U.S.C. §102 "A person shall be entitled to a patent unless ... (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or"

Exhibit 1





Exhibit 2

# United States Patent [19]

Berney

[11] Patent Number: 4,595,130

[45] Date of Patent: Jun. 17, 1986

[54] **REVERSIBLE POURING SPOUT ASSEMBLY  
FOR CONTAINERS**

[75] Inventor: Sheldon Berney, Winnipeg, Canada

[73] Assignee: Reliance Products Ltd., Winnipeg,  
Canada

[21] Appl. No.: 638,358

[22] Filed: Aug. 6, 1984

[30] Foreign Application Priority Data

Jan. 23, 1984 [AU] Australia ..... PG3297

[51] Int. Cl.<sup>4</sup> ..... B65D 25/50; B67D 3/00

[52] U.S. Cl. .... 222/539; 222/189;  
222/543; 222/568

[58] Field of Search ..... 222/189, 460, 461, 530,  
222/539, 543, 545, 567, 568, 538

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Primary Examiner—Joseph J. Rolla

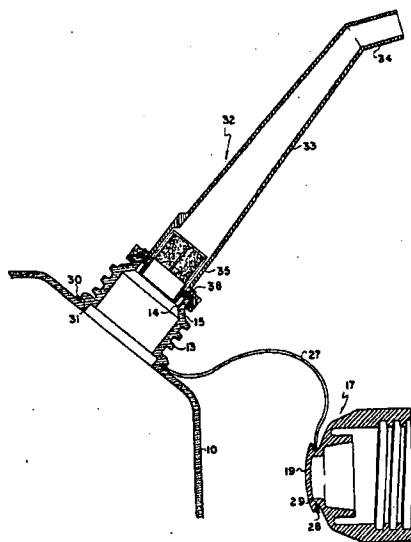
Assistant Examiner—Edward S. Ammeen

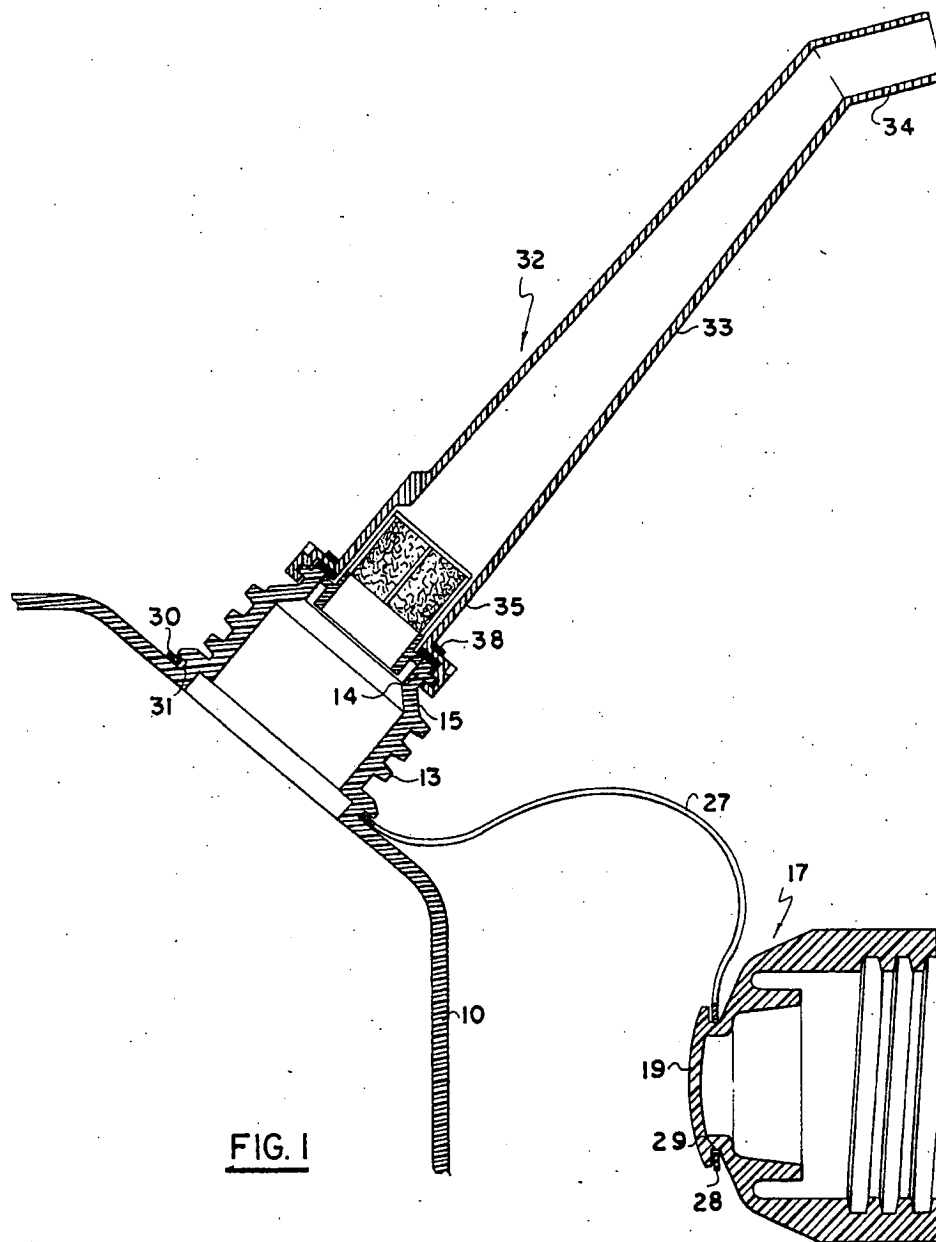
Attorney, Agent, or Firm—Stanley G. Ade

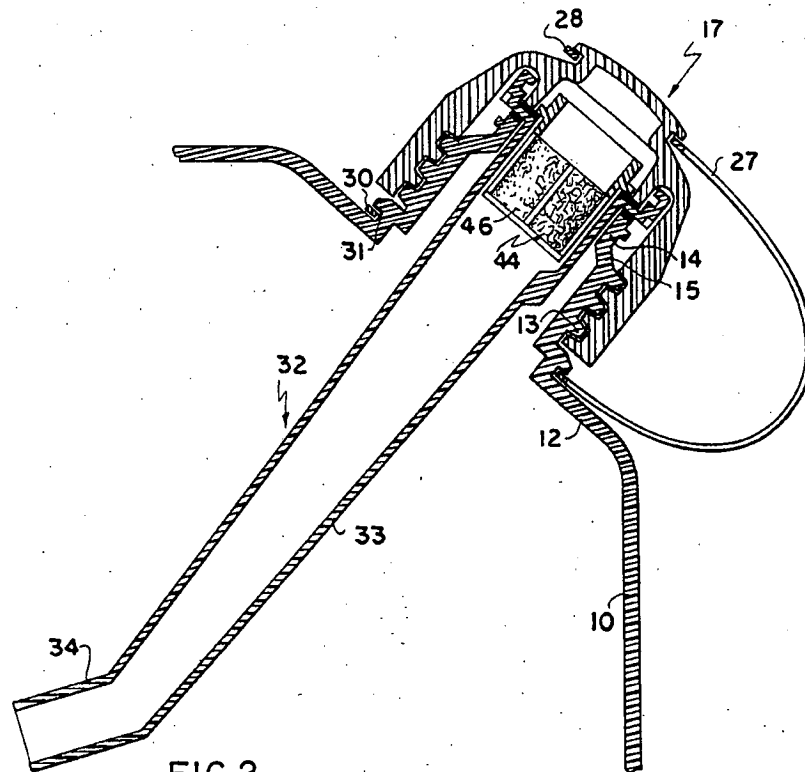
[57] **ABSTRACT**

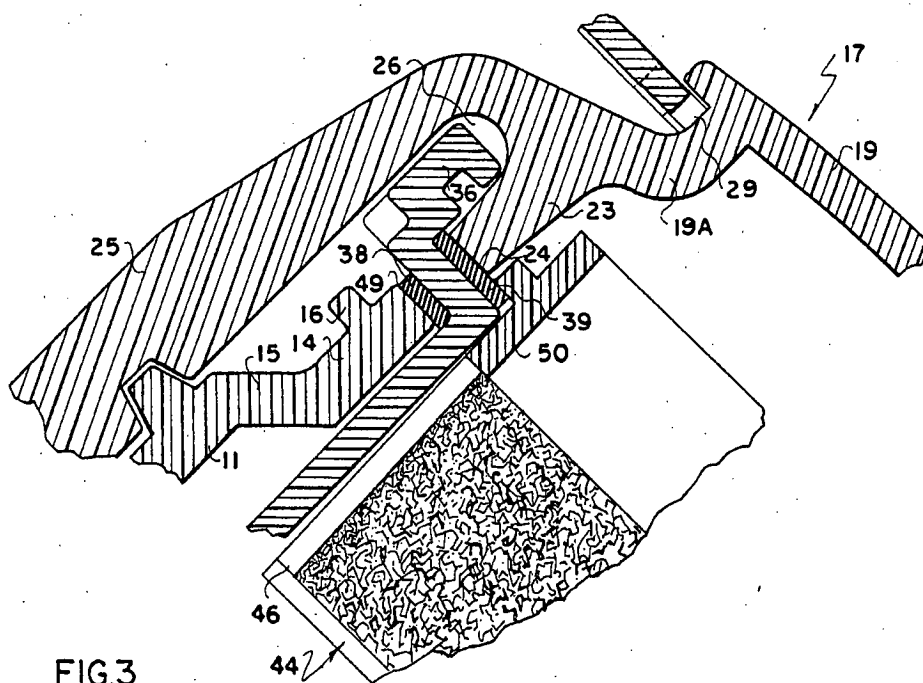
A reversible filler spout assembly is sealably engaged with the filler neck when in the pouring position by camming surfaces on the spout inner end and on the distal end of the filler neck. When reversed and inserted into the neck for storage, the closure cap engages the filler neck and clamps a horizontal flange on the spout between the interior of the cap and the upper end of the neck with resilient seals between the cap and spout and between the spout and filler neck so that no leakage can occur.

10 Claims, 11 Drawing Figures









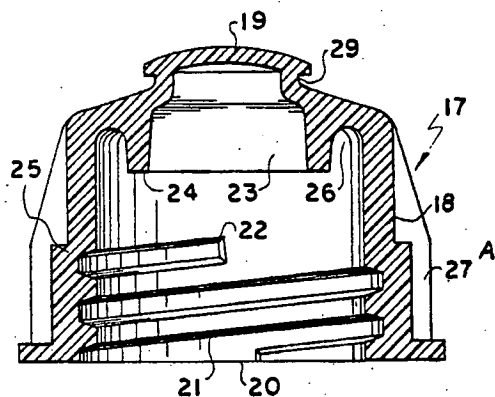


FIG. 5

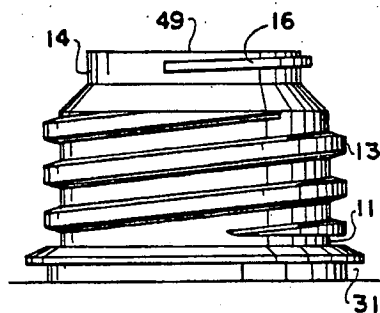


FIG. 6

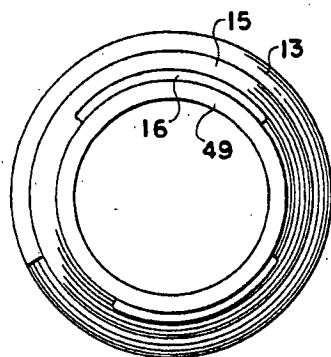


FIG. 7

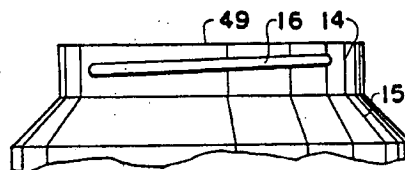


FIG. 8

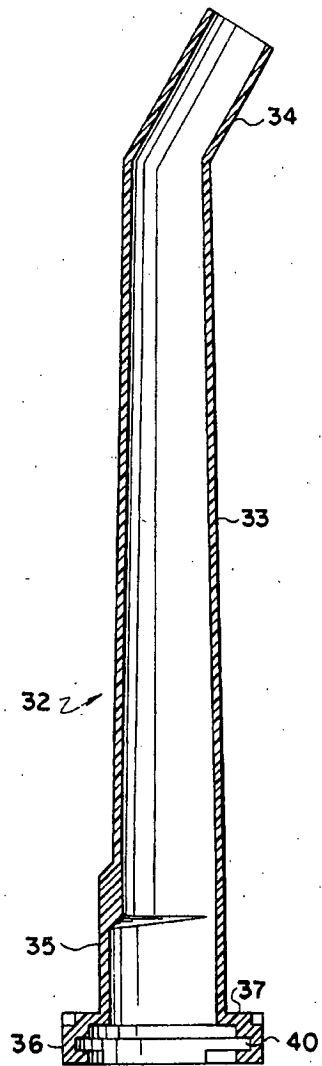


FIG. 9

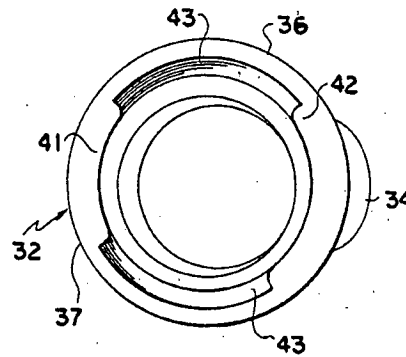


FIG. 10

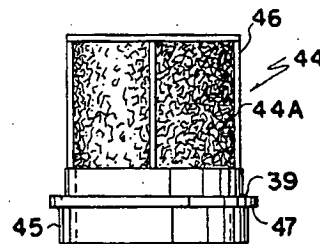


FIG. 11

## REVERSIBLE POURING SPOUT ASSEMBLY FOR CONTAINERS

### BACKGROUND OF THE INVENTION

This invention relates to new and useful improvements in reversible pouring assemblies for containers, particularly containers made from synthetic plastic although the invention is not limited to such synthetic plastic containers.

Conventionally, plastic containers are well known for containing water, gasoline and other liquids and it is of course a requirement that such containers be sealed when not in use yet provide access for the attachment of a pouring spout when it is desired to dispense all or part of the contents therefrom.

Difficulty is experienced firstly, in storing the pouring spout and secondly, to ensure that an adequate seal is provided both when the container is sealed and when the spout is attached for the pouring action.

Many such containers include a pouring spout which may be stored internally of the container with the sealing cap maintaining the spout in the stored position. The cap and spout are removed when it is desired to pour the contents whereupon the spout is reversed and engaged through the cap which is apertured so that it extends outwardly therefrom. The cap is then screw threadably engaged upon the pouring neck thus clamping the spout in sealing relationship with the can and allowing the pouring action to commence.

When it is desired to store such spouts within the container, the cap and spout are removed, the spout is reversed and engaged through the pouring neck of the container, to be stored internally with the flange of pouring spout engaging the outer end of the neck. However in order to seal the container, a blank disc is then engaged within the end of the pouring spout whereupon the apertured cap may be screw threadably engaged over the neck so that the blank disc seals against the spout and the wall of the cap defining the aperture. One of the principal disadvantages of such construction is the fact that the disc has to be removed when it is desired to pour and although the cap may be tethered to the container, it is not possible to tether the disc also so that it often becomes mislaid, dirt incrusts and is generally most unsuitable for use in the majority of circumstances.

### SUMMARY OF THE INVENTION

The present invention overcomes these disadvantages by providing a reversible pouring spout which, when in the pouring position, is detachably securable to the neck of the container and is sealed thereto without the necessity of using an apertured cap.

When the spout is in the stored position within the container, the cap, which is closed on the upper side thereof, engages the pouring neck in sealed relationship thus holding the spout in the stored position and preventing any leakage from occurring. This construction eliminates the necessity for the loose blank disc or other means normally provided to enable such reversible spouts to operate.

In accordance with one aspect of the invention there is provided, in a container which includes a substantially cylindrical pouring neck extending therefrom; a reversible pouring spout assembly selectively movable from an extended, pouring position to an internal, stored position and vice versa, said spout assembly in-

cluding a pouring neck attaching end and an extending pouring spout portion, means cooperating between said spout assembly and said pouring neck to detachably secure said spout assembly in sealing relationship with said pouring neck when in the extended pouring position, and a closure cap detachably engaging with said neck and retaining said spout assembly in the internal stored position, in sealing relationship with said pouring neck and said closure cap.

In accordance with a further aspect of the invention there is provided a combination of a container and a reversible pouring spout assembly, said container including a substantially cylindrical pouring neck extending therefrom said reversible pouring spout assembly being selectively movable from an extended pouring position to an internal stored position and vice versa, means cooperating between said spout assembly and said pouring neck to detachably secure said spout assembly in sealing relationship with said pouring neck when in the extended pouring position, and a closure cap detachably engaging with said neck and retaining said spout assembly in the internal stored position, in sealing relationship with said pouring neck and said closure cap.

With the foregoing in view, and other advantages as will become apparent to those skilled in the art to which this invention relates as this specification proceeds, the invention is herein described by reference to the accompanying drawings forming a part hereof, which includes a description of the best mode known to the applicant and of the preferred typical embodiment of the principles of the present invention, in which:

### DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary cross sectional view showing the pouring neck of a container with the spout secured thereto in the pouring position.

FIG. 2 is a view similar to FIG. 1 but showing the spout in the stored position within the container and the cap engaged over the filler neck.

FIG. 3 is an enlarged fragmentary view of the one side of the spout and cap engaged with the neck as in FIG. 2.

FIG. 4 is an enlarged fragmentary view of a similar portion of FIG. 1 as that shown in FIG. 3.

FIG. 5 is an enlarged cross sectional view of the cap per se.

FIG. 6 is an enlarged side elevation of the pouring neck per se.

FIG. 7 is a top plan view of FIG. 6.

FIG. 8 is a fragmentary side elevation of the upper portion of FIG. 6 taken at 90° thereto.

FIG. 9 is a longitudinal cross section of the spout filter.

FIG. 10 is an underside plan view of FIG. 9.

FIG. 11 is a side elevation of the filter retainer and filter per se.

In the drawings like characters of reference indicate corresponding parts in the different figures.

### DETAILED DESCRIPTION

Proceeding therefore to describe the invention in detail, reference should first be made to FIGS. 1 through 4 in which 10 illustrates in phantom, the upper portion of a container for fluids and the like which includes a substantially cylindrical neck 11 extending

from a planar portion 12 and being screw threaded as at 13, on the outer surface thereof.

The distal end 14 of the pouring neck is of a reduced diameter to the remaining portion of the neck, and connected thereto by means of the truncated conical connecting portion 15. Details of this pouring neck are shown in FIGS. 6 and 7 and formed on the distal end portion are a pair of camming surfaces 16 diametrically opposite from one another and extending part way around the distal end portion 14 as clearly shown, the purpose of which will hereinafter be described.

A sealing cap component collectively designated 17 is shown in detail in FIG. 5 and is also preferably made of plastic. It includes the substantially cylindrical body 18 having a closed one end 19 and an open other end 20. The portion of the cylindrical body 18 adjacent the open end 20 is internally screw threaded as indicated by reference character 21 with the screw threading terminating at a point indicated by reference character 22. Extending downwardly from the interior of the domed portion 19A of the cap, is an annular cylindrical flange 23 terminating at a point indicated by reference character 24 spaced above the inner ends of the screw threads indicated at 22. This annular flange 23 is spaced inwardly from the wall 25 thus defining, with the wall 25, an annular channel 26 all of which is clearly shown in FIG. 5.

A plurality of projections 27A are provided around the exterior of the cap in order to assist in the manual gripping thereof when same is being manipulated. The cap screw threadably engages the neck 11 with the screw threads 21 engaging the screw threads 13.

A flexible tether 27 includes a loop 28 at one end engaging an annular groove 29 adjacent the upper side 19 of the cap and having a further loop 30 engaging an annular groove 31 around the base of the pouring neck 11 thus permitting the cap to be rotated freely yet anchoring same to the container 10.

A reversible pouring spout is provided collectively designated 32 and also preferably made from plastic. It includes an elongated tapered pouring portion 33 with an angulated discharge end 34 formed on the distal end thereof.

The inner or container contacting end 35 includes an annular cylindrical portion 36 connected to the end 35 by means of a planar shoulder 37 and inner and outer resilient gaskets 38 and 39 are provided upon either side of this planar shoulder 37 as clearly shown in FIGS. 3 and 4 and secured as hereinafter described.

A pair of arcuately curved recesses 40 are formed diametrically opposite one another on the inner surface of the cylindrical portion 36, the extent being defined by the ends 41 of the lower lips 42 defining these recesses (see FIG. 10). The remaining portion of the circle upon which these recesses lie, is open as indicated by reference character 43, the purpose of which will hereinafter be described.

A cylindrical filter retainer (see FIG. 11) collectively designated 44 is frictionally engaged within the end portion 35 of the pouring spout and includes a cylindrical body portion 45, an inner end spider 46 spanning the inner end of the cylindrical portion 45 and an annular shoulder 47 formed on the outer end which abuts against the surface 48 which is an inner continuation of the flange 37 all of which is clearly shown in FIGS. 3 and 4. The filter element in the form of plug 44A is preferably made from open celled, sponge type plastic, and fits within the retainer as seen in FIGS. 1 and 2.

Gasket 39 engages around the shouldered cylindrical portion 36 and registers on shoulder 47. Gasket 38 engages around end 35 of the spout and registers on shoulder 37. These gaskets are frictionally engaged and retained or may be adhesively secured to each side of the shoulder 47.

In operation and dealing first with the spout in the stored position shown in FIGS. 2 and 3, the portions 33 and 34 are engaged freely through the filler neck 11 until the resilient seal 38 engages the upper end wall 49 of the portion 14 of the filler neck as clearly shown in FIG. 3 with the remaining portion 36 of the filler spout assembly projecting above the end 49. The outer portion 50 of the filter retainer 44 is substantially flush with the end 49.

The sealing cap 17 is then screw threadably engaged over the filler neck and rotated to move same downwardly over the filler neck until the surface 24 of the annular flange 23 of the filler neck engages upon the sealing washer 39 whereupon a slight further tightening of the cap will compress the sealing washer 39 and also the sealing washer 38 thus completely sealing the interior of the can from the exterior thereof. In this connection, sealing washer 38 seals between the spout and the neck and the sealing washer 39, between the cap and the spout.

Reference to FIG. 3 will show that the portion 36 of the spout is freely engaged within the annular recess 26 in the filler cap and the portion 50 of the filter retainer is freely engaged within the area inboard of the annular shoulder 23 of the cap.

When it is desired to change the pouring spout assembly 32, from the stored position to the pouring position, then the cap is rotated and removed from the filler neck to remain connected to the container by means of the tether 27.

The pouring spout component 32 is then withdrawn from the container and reversed and engaged upon the upper end of the filler neck 11 by positioning the annular areas 43 of the filler spout over the camming ramps 16 on the upper end portion 14 of the filler neck. The filler spout is then partially rotated thus engaging the camming ramps with the recesses 40 of the filling camming ramps, this partial rotation draws the filler neck downwardly until the resilient sealing ring 39 on the portion 35 of the pouring spout engages the upper end wall 49 of the filler neck thus effecting a seal at this point between the interior of the can and the exterior of the filling neck. This allows the contents of the can to be poured through the pouring spout without any leakage occurring at the sealed junction therebetween. It will be observed from FIG. 4 that the extending portion 50 of the filter retainer freely engaged within the upper end portion 14 of the filler neck.

It will therefore be appreciated that a reversible spout assembly is provided which is sealed in either position and without requiring a loose blank washer or disc as is conventional.

Since various modifications can be made in my invention as hereinabove described, and many apparently widely different embodiments of same made within the spirit and scope of the claims without departing from such spirit and scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

I claim:

1. The combination of a container and a reversible pouring spout assembly, said container including a sub-

stantially cylindrical pouring neck extending therefrom, said reversible pouring spout assembly being selectively movable from an extended pouring position of an internal stored position and vice versa, said spout assembly including a pouring neck attaching end and an extending pouring spout portion, means cooperating between said spout assembly and said pouring neck to detachably secure said spout assembly in sealing relationship with said pouring neck when in the extended pouring position, a closure cap detachably engaging with said neck and further independent means cooperating between said cap and said neck to detachably secure said cap to said neck for retaining said spout assembly in the internal stored position, in sealing relationship with said pouring neck and said closure cap and also closing said container regardless of the presence of said spout assembly, said means cooperating between said spout assembly and said pouring neck as aforesaid, including said attaching end engaging over said pouring neck and camming means cooperating between the outer side of said pouring neck and the inner side of said attaching end for moving said attaching end into sealing relationship with the outer end of said pouring neck and sealing means between said attaching end and said outer end.

2. The invention according to claim 1 in which said camming means includes at least two camming surfaces extending outwardly from the side wall of said pouring neck and being substantially equidistantly spaced circumferentially around said side wall and corresponding recesses on the inner wall of said attaching end of said pouring spout assembly engaging said camming surfaces.

3. The invention according to claim 2 in which said attaching end includes an annular flange extending radially outwardly from said pouring spout portion and an annular wall extending substantially at right angles from the outer edge of said annular flange in a direction away from said pouring spout portion, and inner lip portions extending inwardly from the outer end of said annular wall defining, with said annular flange, recesses engageable upon said camming surfaces.

4. The invention according to claim 3 in which said sealing means engages between said annular flange and the outer end wall of said pouring neck.

5. The invention according to claim 1 in which said further independent means cooperating between said cap and said neck include said closure cap screw threadably engaging said pouring neck when said spout assembly is in the inward stored position and means within said closure cap for clamping said pouring spout assem-

bly in said sealed relationship between said closure cap and the outer end of said pouring neck.

6. The invention according to claim 5 in which said means within said closure cap includes an annular cylindrical flange depending downwardly, concentrically from said closed end and spaced inwardly from the surrounding wall of said closure cap and thus defining an annular recess or cavity between said cylindrical flange and said surrounding wall, said cylindrical flange terminating spaced inwardly from the open end of said closure cap, the distal end of said cylindrical flange cooperatively engaging said pouring neck attaching end of said spout assembly and clamping same in sealing relationship to said pouring neck.

7. The invention according to claim 6 in which said attaching end of said pouring spout assembly includes an annular flange extending radially outwardly from said pouring spout assembly and an annular wall extending substantially at 90° from the outer edge of said flange assembly away from said pouring spout portion of said spout assembly, sealing means on each side of said annular flange of said attached end, one between said annular flange and the outer end of said pouring neck, the other between said annular flange and the distal end of said cylindrical flange of said closure cap, said annular wall of the attaching end of said pouring spout assembly engaging freely within the annular recess or cavity between said cylindrical flange and said surrounding wall of said closure cap whereby tightening of said closure cap upon said pouring neck clamps the said annular flange of said attaching end of said pouring spout assembly between said closure cap and the outer end of said pouring neck.

8. The invention according to claim 1 which includes a detachable filter component within said attaching end of said pouring spout assembly.

9. The invention according to claim 8 in which said filter component includes a cylindrical filter retainer frictionally engageable within said attaching end and including a cylindrical body portion and a filter element held within said body portion.

10. The invention according to claim 9 in which said filter component include a cylindrical filter retainer frictionally engageable within said attaching end and including a cylindrical body portion and a filter element held within said body portion and an annular shoulder on the outer end of said body portion abutting against the inner portion of the outer sealing means on said annular flange of the attaching end of the pouring spout assembly.

\* \* \* \* \*

Exhibit 3

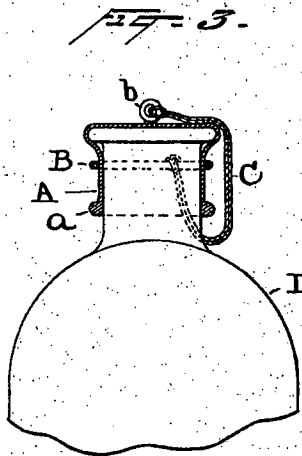
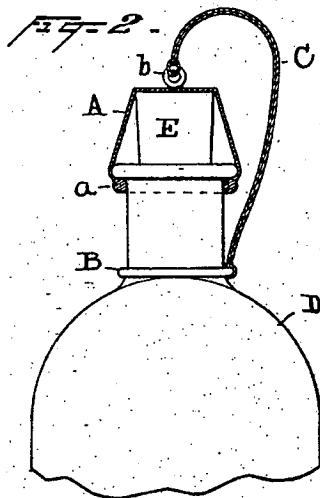
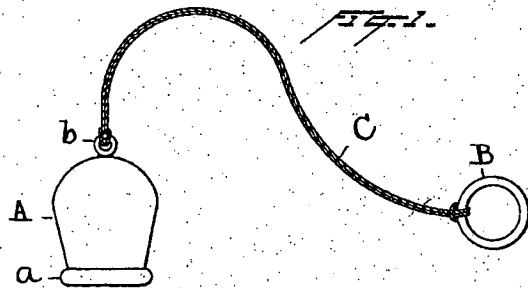
(No Model.)

T. B. BIRNBAUM.

STOPPER OR COVER FOR THE MOUTHS OF BOTTLES.

No. 524,159.

Patented Aug. 7, 1894.



Witnesses  
Ivoris A. Clark  
*W. H. H. H.*

Inventor  
Theodore B. Birnbaum  
By his Attorneys  
*Dyer & Sely*

# UNITED STATES PATENT OFFICE.

THEODORE B. BIRNBAUM, OF LONDON, ENGLAND.

## STOPPER OR COVER FOR THE MOUTHS OF BOTTLES.

SPECIFICATION forming part of Letters Patent No. 524,159, dated August 7, 1894.

Application filed July 29, 1893. Serial No. 481,860. (No model.)

### *To all whom it may concern:*

Be it known that I, THEODORE B. BIRNBAUM, a subject of the Queen of Great Britain, residing in the city of London, England, have invented a certain new and useful Improvement in Stoppers or Covers for the Mouths of Bottles, of which the following is a specification.

The object of my invention is to provide a covering for the mouths of bottles and the like, which by its form and construction is adapted to be used in connection with bottles or jars of widely varying sizes and shapes, and with or without corks or other stoppers, and in every case to furnish a secure, easily applied and effective air-tight covering. In accomplishing this I make such cap of thin and flexible rubber of uniform thickness throughout, except at its open end where it has a bead or stiffened edge, and having a curved or rounded shape or contour such that it may be stretched over the mouth and neck of bottles and other like vessels having varying sizes and shapes, and is not confined in its use to any special class or style of bottles. I also form integral with the rubber cap at the top thereof a ring, and I attach to this ring a cord of flexible material which terminates in an elastic ring, which ring is adapted to be slipped over the neck of the bottle, so that when the cap is removed the same will not be misplaced or lost. This elastic ring also serves another purpose; that is, when the cap or thimble is employed to cover the mouth of a bottle which is closed by a stopper entirely inserted within the mouth, or when the cap is employed alone; in both cases the cap will extend some distance down the neck of the bottle, and unless the cap is held firmly about the neck of the bottle, close to the rim, it will work upward and fail to fit snugly across the mouth of the bottle. The ring referred to obviates this difficulty since it can be slipped over the cap and adjusted close to the rim of the neck of the bottle.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a rubber cap embodying my invention. Fig. 2 is an elevation of a bottle with a cork or other stopper inserted in the mouth thereof and my improved cap placed over the same, the cap being shown in section; and Fig. 3 shows my

invention applied to a bottle not having a cork or other stopper.

A is the rubber thimble or cap, B the rubber ring adapted to be placed about the neck of a bottle, and C a string for securing the rubber cap and ring together.

D are bottles or jars of any form or shape. The string C is tied to ring b of rubber formed integrally with the cap A.

Referring to Fig. 2, it will be seen that the bottle D is closed by a cork or other stopper E, and over this stopper and about the mouth of the bottle is stretched the cap A, the thickened or rolled edge a adjusting itself about the mouth of the bottle and securing the cap in place. The rubber ring B in this view is shown as stretched about the neck of the bottle, and it will be readily understood that when the cap A is removed the same will be held to the bottle by the rubber ring B and cord C.

In Fig. 3 the cap is shown as covering the mouth and neck of the bottle, it being used either alone or in conjunction with a stopper inserted entirely within the mouth of the bottle. When employing the cap in this way, the rubber ring B also serves to assist in making a tight joint. As shown, the ring is slipped up about the cap A after the same has been stretched over the mouth and neck of the bottle; the ring B thus serving to assist in keeping the cap close about the neck of the bottle. To remove the cap when employed in this way, ring B is first slipped down onto the neck of the bottle.

What I claim is—

A covering for the mouths of bottles and the like, having in combination a continuous body of thin elastic rubber shaped as a cap and normally having a rounded contour, the same being of uniform thickness throughout and having a bead or less flexible edge at its open end, a ring formed integrally with said cap at its closed end, a cord extending from said ring, and an elastic ring attached to said cord, substantially as set forth.

This specification signed and witnessed this 18th day of July, 1893.

THEODORE B. BIRNBAUM.

Witnesses:

FRANCIS W. FRIGOUT,  
H. MITCHELL.

Exhibit 4

# United States Patent [19]

Schiemann

[11] Patent Number: 4,526,289

[45] Date of Patent: Jul. 2, 1985

[54] SCREW STOPPER FOR A CAN

[76] Inventor: Wolfram Schieman,  
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Ludwigsburg, Fed. Rep. of Germany

[21] Appl. No.: 633,719

[22] Filed: Jul. 24, 1984

[30] Foreign Application Priority Data

Aug. 5, 1983 [DE] Fed. Rep. of Germany ..... 3328320

[51] Int. Cl.<sup>3</sup> ..... B65D 53/00

[52] U.S. Cl. .... 220/304; 220/375;  
215/329

[58] Field of Search ..... 220/288, 304, 375;  
215/329, 321, 330

[56] References Cited

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Primary Examiner—George T. Hall

[57] ABSTRACT

Between a screw cap and pouring spout a snap device is formed in such a way that an acoustic signal is generated as soon as the seal between cap top and spout edge is compressed by a specific press stroke. Thus, both inadequate sealing pressing and overloading of the seal or threading are largely avoided.

8 Claims, 2 Drawing Figures

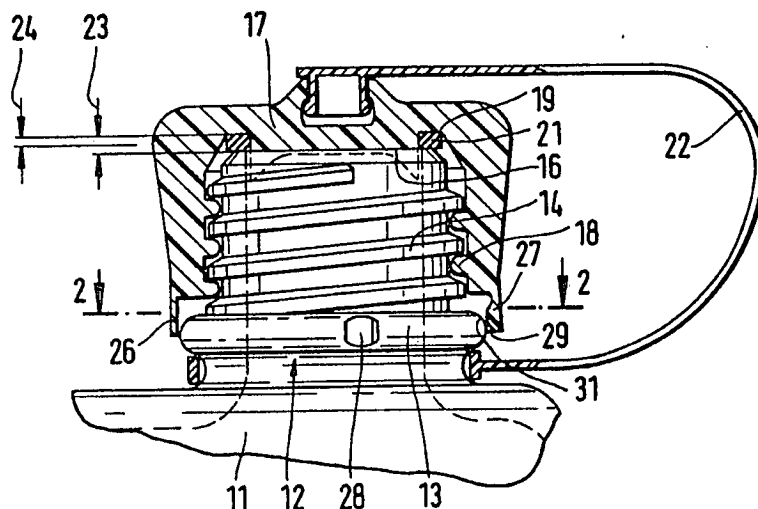


FIG. 1

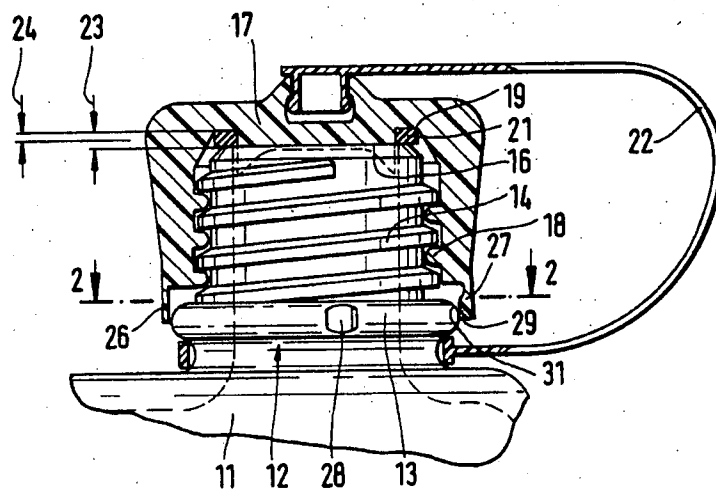
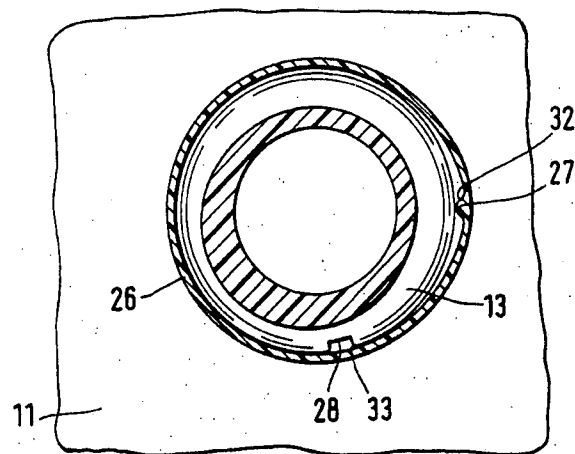


FIG. 2



## SCREW STOPPER FOR A CAN

The invention relates to a screw stopper for a can of synthetic plastics material for fuel, more particularly to a can of synthetic plastics material, comprising a pouring spout with external threads, a screw cap with internal threads screwable on the external threads of the pouring spout, and an elastically deformable seal arranged between the top of the screw cap and the edge of the pouring spout, wherein the cap top, after initial contact with the seal can be further pressed by an axial press stroke having a length exceeding which, the seal is irreversibly deformed or the engagement between internal and external threads is overloaded.

### BACKGROUND OF THE INVENTION

Such screw stoppers are widespread in cans available on the market. Occasional complaints regarding escaping fuel indicate that in these cases the screw stopper was not correctly operated, and the seal was not able to carry out its function. Thus, for example, dirt in the threaded region can make the screwing on of the screw cap so difficult that the closure position is thereby simulated. Likewise, a closure position is simulated if the screw cap is screwed in a tilted position on to the pouring spout, in which case naturally the threading is partially damaged. Another fault consists in that the screw cap is screwed on with excessive force and then either the threading is so damaged that the screw cap can no longer be held correctly, or the seal is irreversibly deformed so that it can no longer carry out its function. The latter is to be expected predominantly in the case of seals of synthetic plastics material. Naturally, both kinds of damage can occur together.

### OBJECT AND STATEMENT OF THE INVENTION

It is, therefore, the object of the invention to provide a screw stopper of the initially stated type in such a way that escape of fuel resulting from an inadequately firmly screwed-on screw cap is avoided as far as possible, but on the other hand damage due to excessive screwing on is likewise excluded as far as possible.

This object is achieved by the improvement wherein a snap device is provided between the screw cap and the pouring spout, in a manner such that on closure of the screw cap an acoustic signal is generated as soon as a predetermined spacing within the range of the length of the press stroke is reached between the cap top and the spout edge.

In accordance with the motto, "When it has clicked put it away", even less technically skilled users are to a certain extent instructed when the closure is correctly closed. Both an excessively slack seating of the screw cap and overloading of the components are thereby largely avoided. Advantageously, the invention includes the following additional features:

An axially overhanging cylinder wall on the end of the screw cap precedes the internal threads and has at least one radially inwardly directed dog in the region of the cylinder wall. An annular collar with a radially receding is on the pouring spout in the region remote from the spout edge, the cylinder wall reaching without appreciable deformation over the collar when the dog engages in the recess, the cylinder wall being elastically deformed at least in the region of the dog when the dog abuts on the collar outside the recess. This produces an

especially expedient development of a snap device. About one-half turn before the final sealed position, the dog begins to slide up on to the collar, in which as a result of the screw principle, the distance component in the tangential direction amounts to a multiple of the pure axial component. Accordingly, the snap device is finely sensitive and precise.

The collar and dog have ramp flanks facing one another in order to facilitate axial sliding up of the dog on to the collar. The recess and the dog have ramp flanks facing one another in the engagement position in order to facilitate tangential sliding of the dog up on the collar upon the opening of the screw stopper. This serves so that the closure and opening of the screw stopper are hindered as little as possible.

The external threads and internal threads have a diameter of about 30 to 50 mm. with a pitch of about 5 mm. and extend axially over about 15 to 25 mm., and the collar extends radially about 2 mm. beyond the external threads and the collar and the cylinder wall have an axial extent of about 5 mm. The dog extends radially inwards about 1 to 2 mm., extends from the edge of the cylinder wall axially in the direction of the cap top about 2 to 6 mm. and is about 2 mm. long in the circumferential direction; and the recess at least somewhat exceeds these dog dimensions in depth, height and width. This indicates dimensioning data recognized to be especially expedient.

The seal is a sealing ring fixed in the region of the cap top. The sealing ring is comprised by rubber. This states an expedient further development with regard to the formation of the seal.

### DESCRIPTION OF THE DRAWING

The invention will be explained in greater detail below by reference to an example of embodiment represented in the drawing, wherein:

FIG. 1 shows a lateral elevation of a screw stopper according to the invention, partially in section,

FIG. 2 shows a section in the plane 2—2 in FIG. 1.

### DETAILED DESCRIPTION

A can 11 in known manner comprises a pouring spout 12 having a collar 13 and an external threading 14 reaching approximately to the edge 16 of the spout. The spout edge 16 is formed as a flat annular surface.

The screw stopper further comprises a screw cap 17 with a corresponding internal threading 18 and a seal 21 in the form of a sealing ring arranged between its cap top 19 and the spout edge 16.

The screw cap 17 is held on the can non-losably by means of a retaining strap fixed beneath the collar 13.

The position of the screw cap as represented in FIG. 1 corresponds to a position in which the seal 21 is just in contact with the spout edge 16. In this position the seal 21 has an axial extent 23 for example of 2 mm. By further closure screwing of the screw cap 17 the cap top 19 is applied further against the spout edge 16 by a press stroke 24 with simultaneous compression of the seal 21. Let it now be assumed that this press stroke can amount to about 1 mm., and on exceeding of this stroke either the engagement between internal threading 18 and external threading 14 is overloaded or the seal 21 is irreversibly deformed, so that it sacrifices its function. Thus it has to be ensured that the seal 21 on the one hand is compressed by approximately this press stroke 24, but on the other hand this press stroke 24 is not exceeded.

The constructional formation of the screw stopper as set forth hitherto corresponds to an embodiment known per se.

In order now to indicate to the user when this ideal seal condition is reached, the snap device as described in greater detail below is formed between the screw cap 17 and the pouring spout 12.

For this purpose on the end face of the screw cap 17 preceding the internal threading 18 an axially overhanging cylinder wall 26 is formed which comprises at least one radially inwardly directed dog 27. The collar 13 in this example of embodiment is present in any case, since it serves for the fixing of the retaining strap 22. Now however it also takes over an additional function. The sole modification on the can consists now in that this collar 13 is provided with a radially receding recess 28. It is understood that in the case of two opposite dogs, correspondingly two opposite recesses are also to be provided. Now the recess 28 is somewhat larger in its dimensions than the dog 27, so that the latter can enter it freely. The internal diameter of the cylinder wall 26 is adapted so that the cylinder wall reaches over the collar 13 without appreciable deformation when the dog 27 engages in the recess 28. However the cylinder wall 26 is elastically deformed at least in the region close to the dog 27 as long as the dog 27 abuts on the collar 13 outside the recess 28.

In the course of the closure of the screw stopper, about a half revolution to one revolution before the final closure position the dog 27 begins to slide up on to the collar 13 in a combined axial and tangential movement. This sliding is facilitated by the fact that the mutually facing surfaces are formed as wedge surfaces 29 and 31. As soon as approximately the limit of the permissible press stroke 24 is reached, the dog 27 snaps into the recess 28 and the part of the cylinder wall 26 deformed hitherto springs back into its relaxed rest position. The generation of a sufficiently loud snap noise is here promoted by the fact that the receding cylinder wall 26 strikes at least briefly against the collar 13, which then in turn transmits the vibration to the can 11 with its large sound radiation area.

In order to facilitate the sliding of the dog 27 on to the collar 13 in the opening of the screw stopper, the surfaces of dog 27 and recess 28 which face one another in the position of engagement have ramp flanks 32 and 33. Small roundings in this sense are to be regarded as equivalent to ramp flanks.

It is also to be pointed out that the snapping of the dog 27 into the recess 28 in a screw stopper of the classification in question is practically not effective in the sense of securing a closed position. In order correctly to close a can for fuel in fact a considerable press force has to be applied in the seal region and the resultant friction forces by far outweigh the possible retaining force of the snap device, so that the latter is practically insignificant.

In the example of embodiment the cylinder wall 26 is closed upon itself, whereby the advantage of greater insensitivity to destruction or deformation of this region

of the screw cap is obtained. The illustration in the drawing is approximately to scale and as regards the dimensions typical for such a screw stopper.

I claim:

1. Screw stopper for a fuel can of synthetic plastic material, comprising a pouring spout with external threads, a screw cap with internal threads screwable on the external threads of the pouring spout, and an elastically deformable seal arranged between the top of the screw cap and the edge of the pouring spout, wherein the cap top, after initial contact with the seal can be further pressed by an axial press stroke having a length exceeding which, the seal is irreversibly deformed or the engagement between internal and external threads is overloaded; further comprising the improvement wherein a snap device is provided between the screw cap and the pouring spout, in a manner such that on closure of the screw cap an acoustic signal is generated as soon as a predetermined spacing, within the range of the length of the press stroke, is reached between the cap top and the spout edge.

2. Screw stopper according to claim 1, comprising an axially overhanging cylinder wall on the end of the screw cap preceding the internal threads, having at least one radially inwardly directed dog in the region of the cylinder wall; and an annular collar with a radially receding recess on the pouring spout in the region remote from the spout edge, the cylinder wall reaching without appreciable deformation over the collar when the dog engages in the recess, the cylinder wall being elastically deformed at least in the region of the dog when the dog abuts on the collar outside the recess.

3. Screw stopper according to claim 2, wherein the collar and dog have ramp flanks facing one another in order to facilitate axial sliding up of the dog on to the collar.

4. Screw stopper according to claim 2, wherein the recess and the dog have ramp flanks facing one another in the engagement position in order to facilitate tangential sliding of the dog up on the collar upon the opening of the screw stopper.

5. Screw stopper according to claim 1, wherein the external threads and internal threads have a diameter of about 30 to 50 mm. with a pitch of about 5 mm. and extend axially over about 15 to 25 mm., and the collar extends radially about 2 mm. beyond the external threads and the collar and the cylinder wall have an axial extent of about 5 mm.

6. Screw stopper according to one of claims 2 or 5 wherein the dog extends radially inwards about 1 to 2 mm., extends from the edge of the cylinder wall axially in the direction of the cap top about 2 to 5 mm. and is about 2 mm. long in the circumferential direction; and the recess at least somewhat exceeds these dog dimensions in depth, height and width.

7. Screw stopper according to claim 1, wherein the seal is a sealing ring fixed in the region of the cap top.

8. Screw stopper according to claim 7, wherein the sealing ring is comprised by rubber.

\* \* \* \* \*

Exhibit 5

**Int. Cl.: 3**

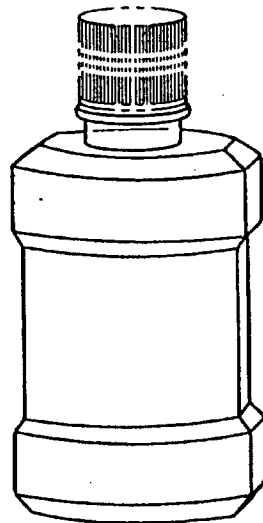
**Prior U.S. Cls.: 1, 4, 6, 50, 51 and 52**

**Reg. No. 2,287,138**

**United States Patent and Trademark Office**

**Registered Oct. 19, 1999**

**TRADEMARK  
PRINCIPAL REGISTER**



**WARNER-LAMBERT COMPANY (DELAWARE  
CORPORATION)  
201 TABOR ROAD  
MORRIS PLAINS, NJ 07950**

**FOR: MOUTHWASH, IN CLASS 3 (U.S. CLS.  
1, 4, 6, 50, 51 AND 52).**

**FIRST USE 5-11-1989; IN COMMERCE  
5-11-1989.**

**OWNER OF U.S. REG. NOS. 41,413, 1,661,370  
AND OTHERS.**

**THE LINING SHOWN ON THE CAP IS NOT  
A FEATURE OF THE MARK, AND IS NOT IN-  
TENDED TO DESIGNATE COLOR.**

**THE MARK IS COMPRISED OF THE CON-  
FIGURATION OF A CONTAINER.**

**SER. NO. 75-396,392, FILED 11-26-1997.**

**SHAUNIA WALLACE, EXAMINING ATTOR-  
NEY**

Exhibit 6

Int. Cl.: 3

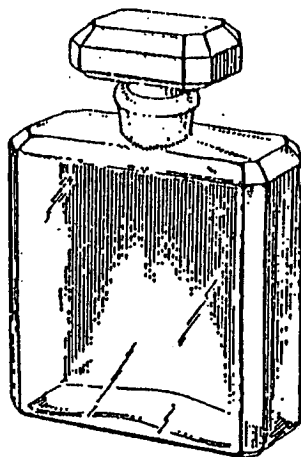
Prior U.S. Cls.: 1, 4, 6, 50, 51 and 52

Reg. No. 2,382,784

**United States Patent and Trademark Office**

Registered Sep. 5, 2000

**TRADEMARK  
PRINCIPAL REGISTER**



CHANEL, INC. (NEW YORK CORPORATION)  
9 WEST 57TH STREET  
NEW YORK, NY 10019

FOR: PERFUME, EAU DE PARFUM, IN CLASS  
3 (U.S. CLS. 1, 4, 6, 50, 51 AND 52).

FIRST USE 0-0-1924; IN COMMERCE 0-0-1924.

OWNER OF U.S. REG. NO. 1,687,481.

THE LINING IS A FEATURE OF THE MARK AND  
DOES NOT INDICATE COLOR. THE STIPPLING IN  
THE DRAWING IS USED TO INDICATE SHADING  
AND IS NOT A FEATURE OF THE MARK.

SEC. 2(F).

SER. NO. 75-708,057, FILED 5-18-1999.

MICHAEL KEATING, EXAMINING ATTORNEY

Exhibit 7



01-26-2004

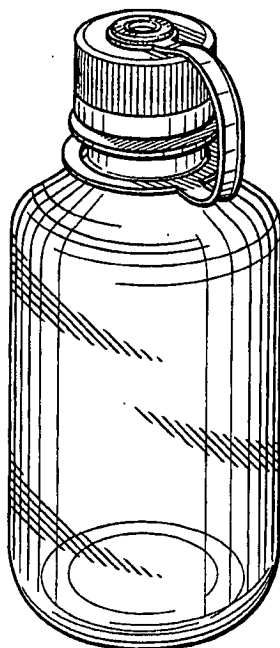
U.S. Patent & TMOfo/TM Mail Ropt Dt. #72

## TRADEMARK

Applicant: Nalge Nunc International Corporation  
Address: 75 Panorama Creek Drive, Rochester, New York 14602-0365

Date of First Use Anywhere: At least as early as April 19, 1992  
Date of First Use in Commerce: At least as early as April 19, 1992  
Goods: Plastic water bottle, sold empty, in International Class 21.

**Mark:** The mark consists of a plastic water bottle as shown, namely, a plastic water bottle having a transparent, generally cylindrical container body with rounded shoulders interconnecting the upper and lower extremities of a cylindrical sidewall to a relatively narrow container neck and a generally flat, circular container bottom, respectively; an opaque screw cap releasably engaged with threads on the upper portion of the neck and having a button connected to the center of its top surface via a short stem; and a strap terminating in small and large annular rings respectively encircling the button stem and the lower portion of the neck such that the large annular ring is spaced apart and visually distinct from the screw cap, wherein the ratio of the diameter of the generally cylindrical container body to the overall height of the water bottle is approximately 0.4 and the ratio of the height of the generally cylindrical container body extending between the neck and the container bottom to the overall height of the water bottle is approximately 0.8.



U.S. Patent & TM Off/TM

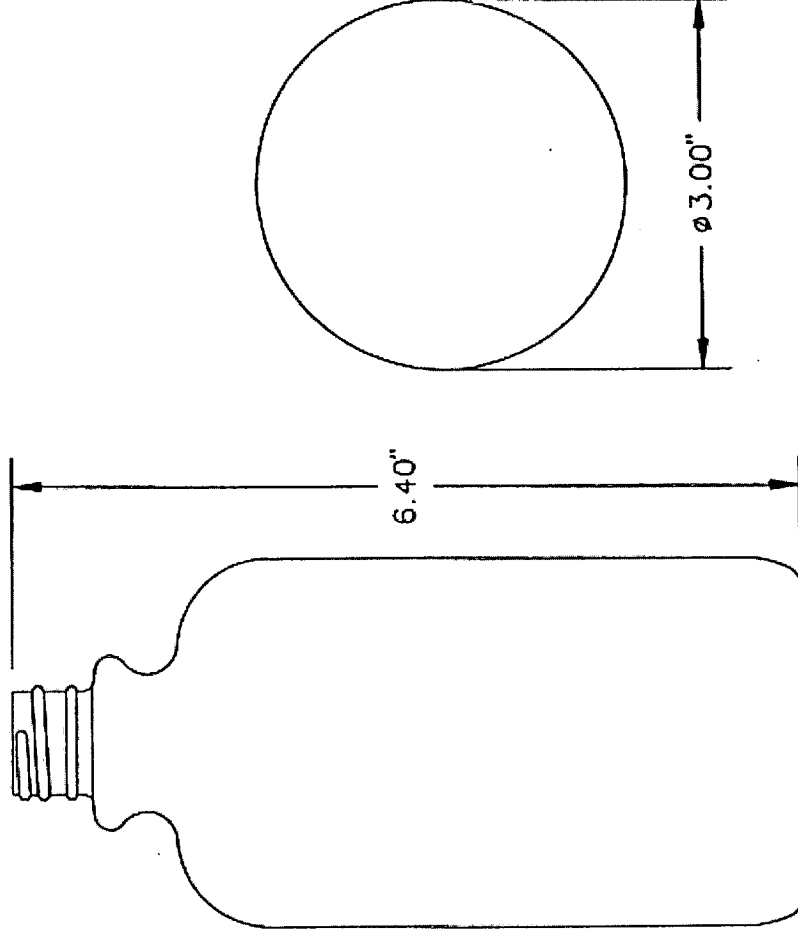
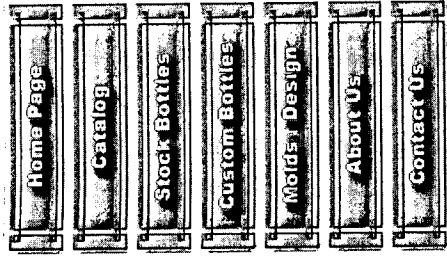
76572253

Exhibit 8

Quality that Makes the Difference

## Catalog

### 18oz Boston Round



**Product #:** 1-2440

**Product Name:** Boston Round

This product has options. See product details below.

**Description:** 18 oz tincture bottle, 24-410 neck finish, estimated gram weight of 42, bottles are packed in bulk service cartons in poly bags

**Pricing**

**Information:**

Package Price: QUOTE

Unit Price: QUOTE

Package Type: Box

Units Per 147

Package:

**Product Details:**

Capacity (oz.) : 18

Neck Finish: 24-410

Material: PVC

Color:

Please Select

Est. Gram

Please Select

Weight:

Packaging: 147 per case

Minimum Order 2500

Quantity:

Name

Title

Company Name

Address

City

State

Postal Code

Country

Phone Number

**Fax Number**

Email Address (Ex. info@bomatic.com):

Please send my inquiry	Clear All
------------------------	-----------

Exhibit 9



## STOCK PRODUCT LINE

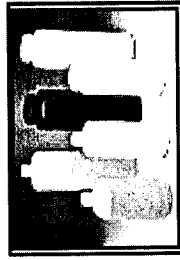
**Rounds** **Dairy / Juice** **3-Style** **Handle Wares / Other**  
**Widemouth Jars** **Paekar Jars** **Environmental Fair Ball**

### MARKETS SERVED

**Food** **Ind / Agricultural** **Motor Oil / Car Care** **Juices & Beverages** **Health & Nutrition**  
**Personal Care** **Toys & Specialty** **Pool Care** **Nautical Devices**

## Rounds

### 16 oz. Boston Round



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[Decorating Capabilities](#)

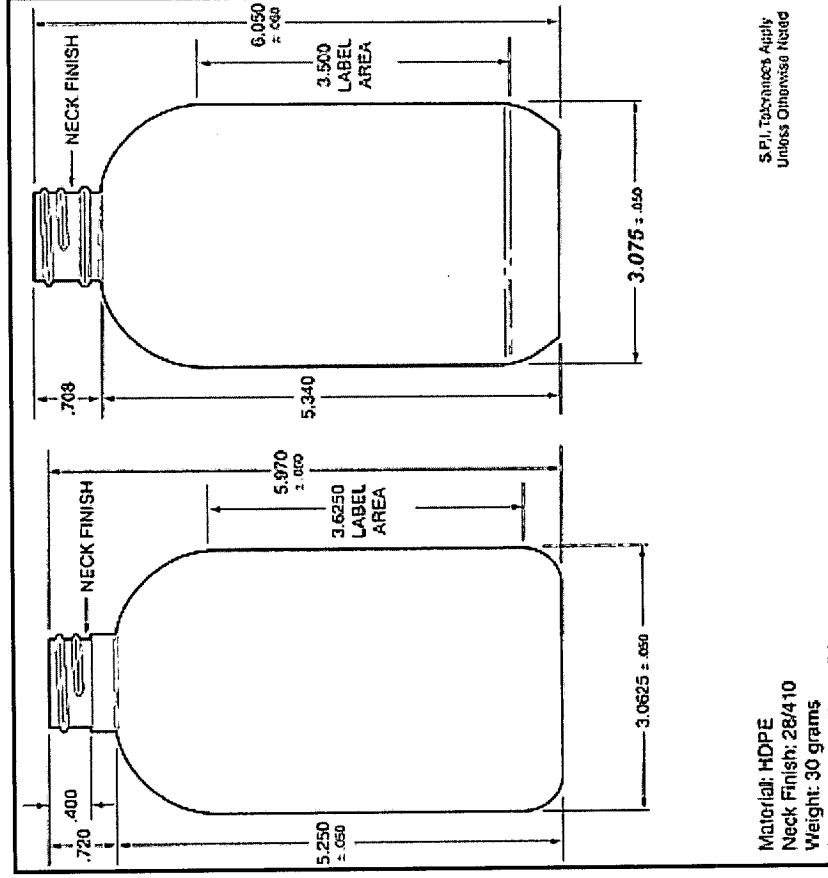
[Environmental Fair Ball](#)

[What's New](#)

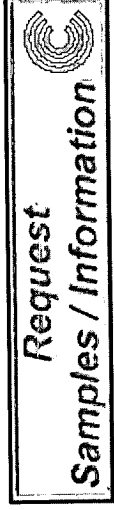
[Contact Mayfair](#)

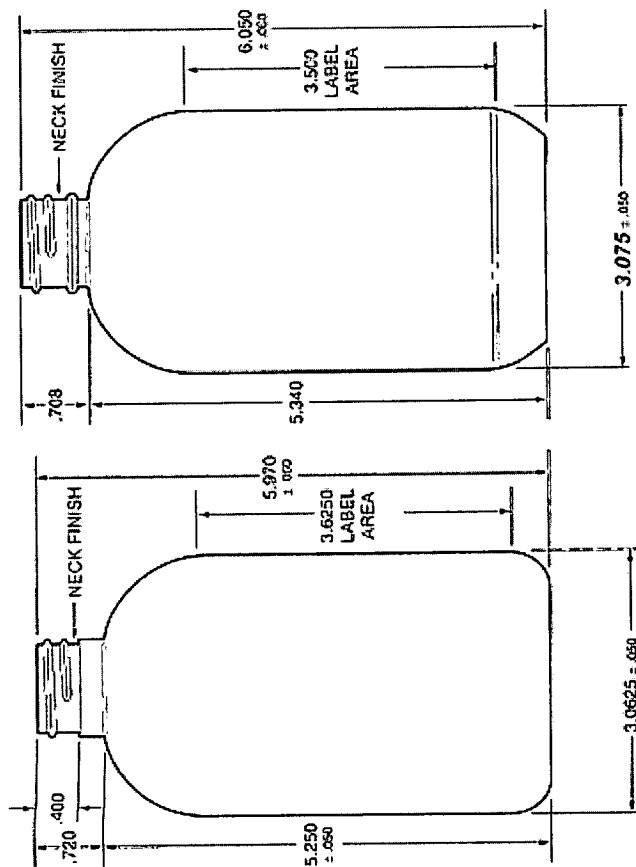
[Request Samples](#)

[Consolidated Container](#)



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S.P.I. Tolerances Apply  
Unless Otherwise Noted

Material: HDPE  
Neck Finish: 28/410  
Weight: 30 grams  
Bulk Pack: 175 Box w/Liner  
Box Size: 23 x 15 7/16 x 29 7/8 in.  
Box Weight: 15 lbs.

**PROOF OF SERVICE**

In the matter of trademark application Serial No. **76/572,253**

I, the undersigned, declare I am over the age of 18 and not a party to this action. My business address is at 17220 Newhope St., Suite 127 Fountain Valley, CA 92708.

On APRIL 4<sup>TH</sup>, 2006, I served:

**MOTION FOR SUMMARY JUDGMENT**

By placing true copies thereof in a sealed envelope, addressed as follows to:

*1 copy sent to:*

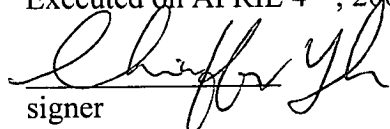
DONALD F. FREI  
WOOD, HERRON & EVANS, L.L.P.  
2700 CAREW TOWER  
441 VINE STREET  
CINCINNATI, OH 45202-2917  
ATTORNEY FOR APPLICANT

*1 copy sent to:*

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Assistant Commissioner for Trademarks  
P.O. Box 1451  
Alexandria, VA 22313-1451

- ☐ BY PERSONAL SERVICE: I caused such envelope to be delivered by hand to the offices of the addressee(s).
- ☒ BY MAIL: I am readily familiar with the practice of the office for collection and processing of correspondence for mailing with the United States Postal Service. Under that practice, correspondence is put in the office outgoing mail tray for collection and is deposited in the U.S. Mail that same day in the ordinary course of business. I am aware that, on motion of the party served, service is presumed invalid if the postal cancellation date or postage meter date is more than one (1) day after the date of deposit for mailing shown on this proof of service.
- ☒ FEDERAL: I declare under penalty of perjury under the laws of the United States that the foregoing is true and that I am employed in the office of a member of the Bar of this Court at whose direction the service was made.
- ☐ STATE: I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on APRIL 4<sup>TH</sup>, 2006, at Fountain Valley, California.

  
signer